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THE WILSON QUARTERLY.

VOL. 4. APRIL, 1892. No. 1.

COLLECTING IN THE GILA VALLEY.

BY F. T. PEMBER.

While collecting in Arizona, I have stopped for a week, on two occasions, at Gila Bend. This was the last of April, 1890 and again about the same date in 1891. Now this is not a summer watering-place, nor pleasure resort of any kind, neither is it a sanitarium; and every time you go there you wish you "had n't come." The town consists of a railroad eating-house and hotel, railroad boarding-house, two or three little stores and saloons, and six or eight low houses, utterly devoid of paint. There are no trees, shade, nor grassy lawns. This comprises the American part of the place. Besides there is an encampment of Papanoes Indians, with a few "Greasers." It stands on a treeless, waterless, and almost rainless part of the Arizona Desert (once the Great American Desert), in its scalding, blistering heat, and beneath a nearly cloudless sky. It has no excuse for being there at all, except that it is the nearest point on the S. P. R. R. to the Gila River for a long distance, and the company wanted a water-tank there. This they supply from a pumping station on the river, six miles away. That is why the town is there, and because it is the nearest R. R. point to the river, is why I was there. I also selected it because there are a great many giant cactus—the home of several species of woodpeckers, pigmy owls, &c.—in that locality.

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The first thing in the way of birds to attract my attention, in that desert village, was a splendid pair of large, glossy ravens, which were feeding in front of the hotel and along the railroad track. They seemed to have no fear, and one could go within twenty-five feet of them. This is the Mexican raven, *Corvus corax sinuatus*. I rather envied them their skins, but did not like to shoot them there, and although I saw them every day, could not catch them "out of town." Next I found a flock of eight or ten killdeer, that seemed to make their home near the water-tank, and at least four miles from any other water. These, and a flock of Brewer's blackbirds, constituted the bird population of the place. This was on my first visit. On my next, the ravens were not there, but the killdeers and blackbirds were the same as before.

From this point it was my custom to make daily excursions to the river bottom, either on foot or by wagon; and if by the last I would make longer journeys across the desert and among the giant cactus, coming to the river several miles away. The very nearest point on the river is said to be but four miles away, though it seems ten when you walk it; and the river bottom, or lower land, is from one to two miles wide. The desert, in places, is utterly destitute of vegetation, though it usually has a few scattering greasewood bushes, from one to three or four feet high, with an occasional cactus, or group of them, which reach a height of 30 to 40 and even 50 feet. These are straight clubs, or with two or three arms, the very old ones only having from five to seven or eight branches. They are always full of woodpecker holes. The lower places, or where water settles or runs in time of rain, have mesquite, ironwood, paloverde, and other trees, usually some 25 feet high, but in places, 40 or 50 feet. On the river bottom the growth of trees, bushes, and vines is very luxuriant, so that in places it is very difficult to get through the tangle at all, or to find any game you may chance to kill. But along the outer border, or where the desert and bottom lands meet, is wonderfully fine

shooting for many of the Arizona birds. This border is three miles or more away, with little or no shooting between; but by bearing to the east for a mile, I came to one of those dry runs, with bushes and a few low trees, which increase as we follow it towards the river, and now our collecting may begin.

One of the first birds to claim our attention is the Ash-throated Flycatcher, which can be taken in any desired quantity. The pretty little Yellow-headed Tit, or Verdin, is next noticed. They are rather common, and one is likely soon to find one of their curious nests, which is some five inches in diameter and as round as an orange. They bristle all over with thorns and ends of stiff twigs, and the round entrance on the side is so small that a finger will scarcely enter it. Whether by chance or otherwise, this, of all the nests I have found, has been on the south or south-east side. Authors say the nest is in bushes four or five feet high, but I have found them at least fifteen feet high. A nest and set of the lovely little eggs are a charming addition to my collection. As we follow along, the Mockingbirds become numerous, but are exactly like those we get from one ocean to the other. Now why is it, that the desert with its wonderfully strong sunlight and lack of shade, devolopes so many pale races, sub-species and species, among so many species and genera of birds, and seems to have no influence whatever on others?

We now begin to see Gambel's Partridge, in pairs or small coveys, hurrying across the wash or running from bush to bush, while the California Shrike seems very common. The glossy Phainopepla are now plentiful, but seem rather shy, and may show you the white in their expanded wings several times before you succeed in shooting them. They, with mockers, shrikes, and ash-throated flycatchers, occur far out on the open desert. We now see sparrows of several species. Among them are Brewer's, Western Chipping, Western Lark, Black-throated, and Sage Sparrows. All along I have noticed what I supposed to be Black-tailed Gnatcatchers, but which prove to be Plumbeous Gnatcatchers, and they are very abundant in this section. Now

we come to some giant cactus and away go a pair of Gila Woodpeckers without waiting for a shot. Here is a chance to hide behind a bush and await their return, with a strong probability that you will tire of it and start on before they come back. They are wild about their nesting places, and you have to watch for them, or shoot them as they are feeding on some of the dead trees of the river bottom, where they seem tame enough.

On this route, one day I secured a pair of Baird's Woodpeckers. I can call them nothing else, though they show more white on forehead and less on back and sides of head than my Texas specimens. The central pair of rectrices are also spotted, and the peculiar smoky brown of the nasal tufts scarcely shows at all. I got these birds in the early morning, and there was something in the slant rays of sunlight coming across the desert that magnified every object, and they looked to me as large as Pileated Woodpeckers. I crept up behind some bushes and actually fired a charge of No. 8 shot at one, and when I went for my game could not understand how it could be so small. I have never seen anything like it before nor since, but in a country that can produce a mirage every day in the year, we need not be surprised at anything.

But the *arroyo* we are following broadens and deepens with large trees, and bird life increases. Quails are becoming very numerous and several species of warblers abound. Of these the Sonora Yellow, Pileolated, Western Yellowthroat, and Orange-crowned are most common, while the neat little Lucy's Warbler is by no means scarce. It is a tax on time and patience however to get many of the last, for they persist in keeping on the opposite side of a thick bush, and after you have waited awhile for a shot, away they go to another, to repeat the operation.

At length we reach the broad bottom lands of the valley, with a large growth of trees and shrubbery, and we find game more abundant and tamer than we have ever seen it anywhere. Here are Gambel's Partridge and Mourning Doves by countless thousands, and it seems as if there was a Jack Rabbit or Cotton-tail under every bush, with fresh

"signs" of deer and other large game. On my first visit there I wanted skins of a few dozen Gambel's, and I entertained the notion that No. 8 shot were the proper size to kill them with. I had but few of them with me, and to make them go as far as possible, shot the birds on the ground, in the open spaces between the bushes, where I could get from two to five at each discharge. "Not sportsman like," you say? Well, it was specimens I was there for. Besides, I do not like to carry too great a weight of cartridges, or to hunt birds out of the almost impenetrable chaparral when dropped one at a time on the wing. Time also seems too valuable when there are so many rare specimens about. After using all of my No. 8 shot and three charges of No. 12, I tried fine dust shot and found that at 25 to 30 yards I could kill as well or even better, than with larger sizes. Firing at a group of three to five, someway the little shot would find the heads of every one of them and kill them stone dead. It seemed to me that I could have killed a thousand in a day.

Doves were so numerous that one could shoot all the time, at pairs or groups of several birds. I could have killed more rabbits in a short time than I could carry. How the country furnished food for so much animal life was to me a mystery. I was told of a party that trapped 24,000 quail for the San Francisco market; thousands were shot, for their use, by people along the valley, while the R. R. eating-house was constantly supplied. This was on my first visit. The next winter a terrible flood swept over the whole valley, washing it out in places and covering it with rubbish and sediment in others. On my last visit game did not seem so abundant, though there was enough, and one could shoot more than he needed in a short time. Eggs of quail could be found easily, and I have found several fine sets in a day without looking for them. At this season all were fresh, though I saw one bird five miles out on the desert, with a flock of young the size of small chickens.

On my first afternoon's shooting here, I started a covey of Gambel's Partridges which flew into a mesquite

thicket near by. Coming close enough for a shot, I found it so dense that I could not see them, and they kept flying away until I thought that all had gone. Just then a thrush with a long curved bill flew into the same thicket, but nearly on the opposite side from me. A glimpse of something through the thick foliage, followed by a quick shot, and then comes a hunt for my bird which I may have killed or not. I had to go around the clump of mesquite, breaking my way through a dense tangle of wiry bushes, and at length find a place where I can "crawl under." Judge of my surprise when I found, not only a nice male Crissal Thrasher, but three fine male Gambel's Partridge within three feet of each other. The fine dust had found them and killed all so dead that I had not heard a flutter.

The last mentioned thrush is quite common, and Bendire's is by no means rare, while Leconte's is also often seen. Palmer's Thrasher I feel sure I saw but did not take it. Here now we may find all the birds already mentioned, and many others, such as Abert's Towhee, Green-tailed Towhee, Chaparral Cock, Gilded flicker, Plumbeous Bush Tit, and many other species.

(To be continued.)

THE NESTING OF THE BLUE-HEADED VIREO, AT FITCHBURG, MASS.

(*Vireo solitarius.*)

BY I. C. GREENE.

Previous to 1890 the nest and eggs of the Blue-headed Vireo were not known to the ornithologists in this vicinity. On May 2, when I was on one of my collecting trips, and in the deep solitudes of a thick pine wood, in a beautiful valley through which a sparkling brook of some size followed its winding course among the rocks, my eye caught sight of a small nest suspended from one of the dead limbs of a pine tree. I approached the spot and found that the nest was one of a Blue-headed Vireo.

The two birds were engaged in finishing the nest. After

watching them a short time I proceeded on my way. On May 13, I again visited the spot and found the female upon the nest. After trying for some time to frighten her from it, without success, I was obliged to climb the tree; but as the nest was out some distance from the trunk and about 10 feet from the ground, I could not get at it without cutting off the limb.

On account of the bird sitting so closely, I thought the set must be complete, so cut the limb off with my pocket saw. Through all of this disturbance, and the breaking off of several small branches, she still remained motionless, protecting her eggs. I brought the nest up close to me and tried in vain to drive her off. I stroked her head and at last took her by the bill and removed her from the nest; upon which she at once flew away, not making a sound nor showing the first signs of defense, anger, or grief; but upon alighting in the top of a tree she gave one loud, clear, call-note, which quickly brought her mate to the scene. But what was my disappointment upon looking into the nest, to find that it contained but one egg. I thought all was lost; but as this was the first nest of the kind I had ever seen, I determined to replace it if possible, and try to persuade the female to complete the set. So I took from my pocket some common white string and tied the limb back as well as could be done without a ladder. The white string was quite conspicuous, as it was necessary to suspend the broken branch from limbs above in order to have it somewhere near the original position. By this time the male had arrived and the female kept flying from tree to tree, every now and then coming very near to me, to see what I was doing. She uttered a few very soft, plaintive notes and appeared so humble, that I could but think of her grief at seeing her home disturbed. I left the tree and watched the little innocent creature approach her nest. She first flew to the branch over the place where the nest was originally, which appeared to be her accustomed way of going to the nest, and dropping down as though she expected to alight in it, fluttered a moment, then returned to the tree.

After uttering a soft cry of disappointment, she again approached her nest. This time lighting upon a branch near by. She carefully examined the nest and string, then chirping a few syllables to her mate, entered the nest, although somewhat dissatisfied with it. Her mate remained near by, flying from branch to branch over head, and expressing his sympathy in a few soft notes. At length, as if to cheer her, he perched himself upon a twig over head, and in the midst of that lonely wood, pealed forth a clear, sweet song, making the whole scene very pathetic. From their meek and innocent conduct, and from the gratitude expressed by the song of the male upon finding that the little home had not been altogether destroyed, it somewhat moved my pity for having caused these beautiful little creatures this needless distress. Had they been defiant as a Kingbird or the like, one would not be moved by the same sense of compassion.

On May 17, I again visited the Vireo's nest and found four eggs, which I took. The nest was placed in a pine tree, as above stated, on a dead, horizontal limb, about ten feet from the ground and six feet from the trunk. It was suspended by the brim from a forked branch, and was fastened to it by fine strips of fibrous bark and cobwebs. It was rather light colored, composed of fine bark fiber, mostly of the inner bark, intermingled with plant down and spider's webs ; on one side was interwoven quite a piece of newspaper, also several strips of the thin outer bark of the white birch. The nest was well made and strongly attached to the limb. It was lined with pine needles and very fine dried grass.

The eggs were of a light creamy color, with numerous small chestnut-colored spots around the large end, in the form of a wreath, some mingling into blotches. The central area was marked with fine specks of dark brown, almost black. A second nest was found on May 23. This nest was likewise in a solitary, though beautiful spot in the deep woods, and was suspended from the branch of a tall laurel bush over a bed of green ferns growing around a

large boulder, making a most beautiful scene, lighted up by the beams of bright sunlight let in through the tops of the tall pine trees.

This nest contained two eggs of the Cowbird, one of which was under the lining of the nest, as the birds had re-lined it in order to destroy the Cowbird's egg. But this was in vain, for the scamp deposited a second one when the set was half completed. This set, when complete, contained four eggs of a pure white color with spots of chestnut evenly distributed about the larger end, and not distinctly wreathed as those of the first set. A few blotches were present. The nest was not as well proportioned as the first, but was well made and of a dark color. It was composed of about the same substance as the other, and oddly enough, a piece of newspaper was conspicuously interwoven as in the other one, though they were found more than three miles apart. These nests were not ornamented at all with lichens, as is often reported to be the case.

The nest of the Blue-headed Vireo measures as follows: Diameter, outside, 3 to 4 inches; inside, $1\frac{3}{4}$ to $2\frac{1}{8}$ inches. Depth, outside, $2\frac{1}{4}$ to $2\frac{1}{2}$ inches; inside, $1\frac{1}{2}$ inches. The variations in the measurements of the egg are: .71 x .56 inches; .75 x .57 inches; .73 x .58 inches.

The Blue-headed Vireo arrives here from the South as early as April 22, and during the migration is to be found abundantly in the woods, but not found as common, if at all, near the houses or about the trees in the streets. They pass northward, and by the last of May become very rare in this locality. They return again in September and linger until October.

BIRDS OF HILLSBORO COUNTY, FLORIDA.

BY WILLARD ELIOT.

IN THE VICINITY OF LAKE THONOTOSASSA.

1. **Podilymbus podiceps.** PIED-BILLED GREBE.—Resident, common, breeds.

2. **Sterna antillarum.** LEAST TERN.—In the years from 1870 to 1888

the Least Tern was a summer resident at the lake, and at least fifty pairs bred on the long sand-bars in the lake. I have not seen one since 1888, for some unknown reason.

3. **Anhinga anhinga.** ANHINGA.—Resident, common.

4. **Phalacorocorax dilophus floridanus.** FLORADA CORMORANT. Casual visitor from salt water.

5. **Pelicanus erythrorhynchus.** WHITE PELICAN.—Casual winter visitant. A fine male was killed at the lake in 1874.

6. **Pelicanus fuscus.** BROWN PELICAN.—Occasional visitor from salt water.

7. **Anas boschas.** MALLARD.—Migrant.

8. **Anas carolinensis.** GREEN-WINGED TEAL.—Rare visitant.

9. **Anas discors.** BLUE-WINGED TEAL.—Rare resident.

10. **Spatula clypeata.** SHOVELLER.—Common migrant.

11. **Dafila acuta.** PINTAIL.—Common migrant.

12. **Aix sponsa.** WOOD DUCK.—Common resident.

13. **Branta canadensis.** CANADA GOOSE.—Rare. A flock of seven visited us during the three successive years 1888 to 1890.

14. **Ajaja ajaja.** ROSEATE SPOONBILL.—Rare resident. Saw a flock of three in 1891.

15. **Gnara alba.** WHITE IBIS.—Abundant Resident.

16. **Tantalus loculator.** WOOD IBIS.—Common resident.

17. **Botaurus exilis.** LEAST BITTERN.—Rare resident.

18. **Ardea occidentalis.** GREAT WHITE HERON.—Rare resident.

19. **Ardea herodias.** GREAT BLUE HERON.—Common resident.

20. **Ardea egretta.** AM. EGRET.—Common resident.

21. **Ardea candidissima.** SNOWY HERON.—Common resident.

22. **Ardea tricolor ruficollis.** LOUISIANA HERON. — Common resident.

23. **Ardea cœrulea.** LITTLE BLUE HERON.—Common resident.

24. **Ardea virescens.** GREEN HERON.—Abundant resident.

25. **Nycticorax violaceus.** YELLOW-CROWNED NIGHT HERON.—Rare resident.

26. **Grus mexicana.** SANDHILL CRANE.—Rare resident.

27. **Rallus longirostris crepitans.** CLAPPER RAIL.—Rare resident.

28. **Ionornis martinica.** PURPLE GALLINULE.—Rare resident.

29. **Fulica americana.** AM. COOT.—Common resident.

30. **Gallinago delicata.** WILSON'S SNIPE.—Common migrant.

31. **Totanus flavipes.** YELLOW LEGS.—Common migrant.

32. **Actitis macularia.** SPOTTED SANDPIPER.—Common resident.

33. **Ægialitis vocifera.** KILLDEER.—Common resident.

34. **Colinus virginianus floridanus.** FLA. BOB-WHITE.—Abundant resident.

35. **Meleagris gallopavo.** WILD TURKEY.—Abundant resident.

36. **Zenaidura macroura.** MOURNING DOVE.—Abundant resident.

37. **Columbigallina passerina.** Ground Dove. — Abundant resident.

38. **Cathartes aura.** Turkey Vulture.—Abundant resident.

39. **Catharista atrata.** Black Vulture.—Abundant resident.

40. **Elanoides forficatus.** Swallow-tailed Kite.—Rare resident.

41. **Circus hudsonius.** Marsh Hawk.—Common resident.

42. **Accipiter cooperi.** Cooper's Hawk.—Common resident.

43. **Buteo lineatus alleni.** Fla. Red-shouldered Hawk.—Common resident.

44. **Haliæetus leucocephalus.** Bald Eagle.—Common resident.

45. **Falco sparverius.** Am. Sparrow Hawk.—Abundant resident.

46. **Polyborus cheriway.** Audubon's Caracara. — Occasional visitor from lower part of country.

47. **Pandion haliaëtus carolinensis.** Am. Osprey. — Common resident.

48. **Syrnium nebulosum.** Barred Owl.—Common resident.

49. **Megascops asio floridanus.** Fla. Screech Owl.—Abundant resident.

50. **Bubo virginianus.** Great Horned Owl.—Rare resident.

51. **Coccyzus americanus.** Black-billed Cuckoo.—Common resident.

52. **Ceryle alcyon.** Belted Kingfisher.—Common resident.

53. **Campephilus principalis.** Ivory-billed Woodpecker.—Rare resident.

54. **Dryobates villosus audubonii.** Southern Hairy Woodpecker.—Common resident.

55. **Dryobates pubescens.** Downy Woodpecker. — Abundant resident.

56. **Ceophlœus pileatus.** Pileated Woodpecker.—Common resident.

57. **Melanerpes erythrocephalus.** Red-headed Woodpecker.—Common resident.

58. **Colaptes auratus.** Flicker.—Abundant resident.

59. **Antrostomus carolinensis.** Chuck-will's-Widow. — Common resident.

60. **Chordeiles virginianus chapmani.** Fla. Nighthawk. — Abundant resident.

61. **Chætura pelagica.** Chimney Swift.—Abundant summer resident.

62. **Trochilus colubris.** Ruby-throated Hummingbird.—Common resident.

63. **Tyrannus tyrannus.** Kingbird.—Common resident.

64. **Myiarchus crinitus.** Crested Flycatcher.—Common resident.

65. **Sayornis phœbe.** Phœbe.—Common resident.

66. **Cyanocitta cristata florincola.** Fla. Blue Jay.—Abundant resident.

67. **Corvus americanus floridanus.** Fla. Crow.—Abundant resident.

68. **Agelaius phœniceus.** Red-winged Blackbird.—Abundant resident.

69. **Sturnella magna.** Meadowlark.—Abundant resident.

70. **Quiscalus quiscula aglæus.** Fla. Grackle.—Common resident.

71. **Quiscalus major.** Boat-tailed Grackle.—Common resident.

72. **Pipilo erythrophthalmus alleni.** White-eyed Towhee.—Abundant resident.

73. **Cardinalis cardinalis.** Cardinal.—Abundant resident.

74. **Piranga rubra.** Summer Tanager.—Rare resident.

75. **Progne subis.** Purple Martin.—Common resident.

76. **Ampelis cedrorum.** Cedar Waxwing.—Rare resident.

77. **Lanius ludovicianus.** Loggerhead Shrike.—Abundant resident.

78. **Mimus polyglottos.** Mockingbird.—Common resident.

79. **Galeoscoptes carolinensis.** Catbird.—Common resident.

80. **Harporhynchus rufus.** Brown Thrasher.—Common resident.

81. **Thryothorus ludovicianus.** Carolina Wren.—Abundant resident.

82. **Thryothorus ludovicianus miamensis.** Fla. Wren.—Common resident.

83. **Sitta carolinensis.** White-brested Nuthatch.—Common resident.

84. **Sitta pusilla.** Brown Headed Nuthatch.—Abundant resident.

85. **Parus carolinensis.** Carolina Chickadee.—Common resident.

86. **Polioptila cærulea.** Blue-gray Gnatcatcher.—Abundant resident.

87. **Turdus mustelinus.** Wood Thrush.—Common resident.

88. **Merula migratoria.** Am. Robin.—Abundant winter resident.

89. **Sialia sialis.** Bluebird.—Abundant resident.

The above list is incomplete, but it contains all the birds that I am sure of. The families of warblers, wrens, and sparrows are almost unknown to me at present. I hope to extend my knowledge of these groups considerably when I shall have gotten hold of some good reference books.

NESTING OF THE AM. LONG-EARED OWL IN MILWAUKEE CO., WIS.

BY ALLAN W. CARPENTER.

This Owl is a quite common resident of southern Wisconsin, but, like the rest of its family, is rarely observed, on account of its retiring habits.

On April 15, 1890, while on a collecting trip near Milwaukee, Wis., I made my first acquaintance with the nesting of this bird. The nest was situated in a small tamarack tree in a dense tamarack swamp, and was undoubtedly the former property of crows, several pairs of which were nesting within a few yards of the place.

When the nest was discovered the owl was sitting upon it in plain sight, and had it not been for this fact, the nest would probably have been passed by for a crow's. The owl did not leave the nest until I was half way up the tree (the nest was about 35 feet from the ground), then she flew off and glided away with noiseless flight.

The nest contained five dirty-white eggs, deposited upon a scanty lining of feathers from the owl's breast. The eggs were so badly soiled and discolored that the original color, a pure white, was hardly discoverable.

The owl (only one of the pair was noticed) stayed near during the robbing of her home, now and then flitting from tree to tree and uttering a chicking sound.

On blowing, the eggs were found to be badly incubated, but the contents were successfully removed. The dimensions of the set, which is still in my posession, are as follows: 1.62 x 1.28, 1.67 x 1.24, 1.61 x 1.30, 1.58 x 1.31, 1.63 x 1.31.

From the statement that the owl and crows breed in such close proximity it might be inferred that the two species were on friendly terms. Such, however, does not seem to be the case. Before leaving the swamp I observed a number of crows attacking and driving before them an owl of this species.

In this same swamp and on this same day, I took a set of three eggs of Red-tailed Hawk.

THE BALD EAGLE ON CURRITUCK SOUND.

BY H. H. BRIMLEY, RALEIGH, N. C.

On Currituck Sound the Bald Eagle may be classed as common.

The "Sound" is a stretch of water some forty miles long and narrow in proportion. The water is brackish — I have drank it when pushed — and shallow, and the whole expanse is the winter resort of innumerable water-fowl — Whistling Swans and Canada Geese in thousands, and ducks, Canvas-backs and Redheads especially, in tens and hundreds of thousands, if not millions. Deer are found on the "Banks," and Bear are not uncommon in the swamps. The large growth around the shores is mostly pine, and there do the Eagles make their resting place.

I well remember my first introduction to this bird. Riding along the road from the steamboat landing to my host's house, seated in the straw at the bottom of the cart that was drawn by a festive steer of pig-headed proclivities, when overhead loomed a great, shadowy form through the gathering dusk of the January evening, and my first Bald Eagle passed out of sight into the surrounding gloom.

To prepare a collection of the water-fowl of the state was my object, and during the time that I stayed I had good opportunities of studying the habits of the Eagles. It was rarely that a good, searching look all around would fail to detect one or more of these noble birds, and frequently, several would be in sight at once.

My host owned and controlled quite a lot of marsh suitable for point shooting, and also, some of the small, outlaying islands much frequented by ducks and geese, all being free to his boarders. He employed some four or five professional gunners, who killed ducks for the market when not employed in providing sport for the guests of the house.

On one occasion two of them were shooting over a stand of decoys set off the point of "Five Islands." A bunch of Redheads swung down over the stools, leaving several of their number on the water as the gunners let then have it.

Before the men had time to leave the blind and take out their boat after the cripples, a large Bald Eagle swept over the water, picked up one of the ducks, brought it to the Island close to the blind, there to be discussed at leisure. This was too much for the gunners ; the Eagle was promptly laid low and left where it fell. It was some days before I heard of this, it being too common an occurrence to be thought worthy of special mention. I went out to "Five Islands" as soon as I could after hearing of it, but found the specimen too far gone to be saved. It was a very large female in adult plumage. I saved one of the claws, and some New Yorkers who came along about then in the light-house tender, saved the other.

As near as I could estimate, there were not less than two hundred professional gunners shooting on the Sound, and besides these there are the members of some seven or eight ducking clubs, as well as a number of individual sportsmen.

The immense amount of shooting done by this army of hunters results in thousands of crippled fowl, and on these the Eagles feed and grow fat. Although I have never been there in Summer time, I presume the Ospreys keep the larder supplied then ; in Winter their services are not required.

Once, when weary of waiting in a blind for the fowl that did not come, I had a good chance to watch the performances of an Eagle in persuit of his dinner. Several hundred yards away was a large flock of Coots feeding, diving with an effort and a splash, as these birds do ; the noise of their movements being distinctly audible where I stood. Suddenly a Bald Eagle appeared on the scene, sailing low over the Coots, not more than three or four feet above the water. The birds in his immediate vicinity dived or flew on a few yards and always, for a small space around him, there was a patch of clear water, while beyond that the Coots were as thick as fleas on a white dog in Summer time. The Eagle kept quartering back and forth for some time, occasionally making a dash at a bird that had let him get a little too close, but always unsuccessfully. This was kept up for

quite a while until the whole flock gradually worked out of sight. Industry was apparently unrewarded in this case.

Knowing that I wished to kill an Eagle, one of the farm hands offered one day to take me within gunshot of a pair. He was hauling pine straw with a cart and yoke of steers, and said that if I would get into the cart, he would drive me right beneath a pine in which were a pair of them. I grabbed my gun and a few shells loaded with No. 1, and jumped into the cart in a hurry. By and by we came within sight of the tree; and there they were sure enough, two splendid white-headed fellows, the sight of which set my heart thumping like the recoil of an old musket loaded for "baar." On we went, the cart jerking and jolting over the stumps and prostrate sticks until right beneath the tree. This was my first experience of being within gunshot of an Eagle, and to say that I was flurried is putting it mildly. Instead of jumping out and taking a fair shot from solid ground, I stayed in the cart, aimed at the lower one of the two, and fired just as the wheel of the cart flopped down in a rut. The shot went somewhere, probably not within ten yards of what I aimed at, and as the birds left the tree, I gave them the other barrel — with like success. I pass over the next five ninutes; what was said was not for publication, but only as a guarantee of my good faith.

In driving over to the store at the steamer landing on the canal, the Albemarle and Chesapeake, one day, an Eagle was seen on a sand bar, running out into Coinjock Bay, feeding. I got out of the buggy and with my .38 Smith and Wesson in hand, crept up behind the bushes as near as I could. The Eagle saw me and rose, and I gave him all five bullets as quick as I could pull trigger, but he did not stop. In fact he seemed quite in a hurry to get away.

On several occasions in coming back home through the pines, one of these great birds would crash out of the trees in front and sometimes a snap shot would be tried, always unsuccessfully, however. To tell the truth I did not kill an Eagle while I was there, but could probably have collected

a few had I devoted much time to them. One of the gunners finally procured me an adult male, and with that I had to be satisfied.

Immature, dark-brown specimens were sometimes seen, but were not as plentiful as the full-plumaged white-heads. The natives call the dark birds Washington, or Gray Eagles.

I have taken it for granted that crippled ducks form the chief food item of the Currituck Sound Eagles in Winter almost entirely from hearsay evidence, and I do not think I am mistaken in this, as the evidence of the market gunners all points that way. Frequently could the great birds be seen carrying something in their claws about the size of a duck, and from the ease with which the cripples could be caught along the edges of the marsh, and from what I saw and heard, the conclusion is natural that the Eagle of this locality is an epicure, living principally on the flesh of the toothsome Redhead and Canvas-back.

Regarding their nesting I have no data to give. I was told, however, that there were no less than three nests on one single island, and I see no reason to doubt the statement. From their abundance it seems to me probable that they must nest in some numbers along the shores of the Sound; and from their wary habits, and the fact that they are not much molested, or systematically hunted, either for themselves or their eggs, I think it will be years before this noble bird is driven from his chosen home and well-filled larder on Currituck Sound.

A BIRD OF THE NORTHLAND.

(*Spizella monticola.*)

BY HARRY E. MILLER, S. E. N. Y. STATE.

In the last days of the tenth month, golden October, when all the leaves have fallen strewing the ground with a tinted carpet of many colors; when the days are slowly growing colder, reminding us that winter is soon to reign over the rest of the seasons; after other songsters have

flown far away southward to remain till the bright, joyous Spring succeeds the reign of "King Winter," there comes a flock of little birds from many miles to the northward, to our yards, gardens, and fields, singing their sweet little melodies, their calls sounding cheerfully over the keen frosty air.

The Tree, or Canada Sparrow, breeds above the boundary of our country, spending the last part of the fall, winter, and early spring in eastern North America. In appearance this bird is much like the Chipping Sparrow, but as the last named is not a winter resident you are not liable to get the two species confounded. A reddish-brown crown, more or less dusky in the center of the breast, and shades of yellow, brown, and gray constitute the colors of our Canadian visitor.

The little Tree Sparrow is fond of sheltered glens where food is plenty, where the sun strikes the warmest; here you may find them in flocks and squads feeding on the scattered seeds which they can find, allowing you to approach very near without inciting to flight, for this sparrow is not classed amongst the shy birds. No matter how cold it may be he seems always cheerful. Sitting close to a limb with the feathers fluffed up, is a position we see him in often when it is very cold. The best time to observe these birds is generally in the morning when the largest number are together, for later in the day they break up into squads, each party feeding by itself. The Tree Sparrow, as far as I know, has a peaceable character, attending to his own business, which employs all his time, without interfering with other birds' rights and movements.

A flock of these sparrows numbering about two hundred spent the past winter in my locality giving me ample means to study their songs and movements; but this is the first visit they have made to this vicinity as far as I can find out.

The song of the Canada Sparrow is superior to that of any of our local Sparrows: most of the songs, heard by the writer were in the morning between seven and ten. Why

this is so, I do not know unless the birds are glad that "grub time" has come again after the long night's rest. Often when the thermometer is down to zero, one may hear them singing away as if their little throats would split. I am quite positive that this bird does not sing on the ground, but when musically inclined mounts to some position above "terra firma." Most of the notes, for that matter all of them, are clear, bell-like, and decided. A bird singing in winter will be noticed, the song highly appreciated, and if any sweet notes prevail will be noted by the listener more so than when the woods, fields, and yards are full of songbirds. The Tree Sparrow's songs, of which it has a number, have but a slight rising and falling from the beginning to the end. Some of the notes, particularly, will be distinguished from the rest by their liquid, bell-like trembling. The first song in clear silvery notes is as follows: "*tee-dee-tee-dee-tee-dee-dee.*" The last three notes uttered in much quicker time than the first four, which are especially clear, while on the last three there is a slight falling inflection, just enough to make it all the more beautiful. Some songster sometimes includes these notes in the first song which, of all the writer has heard, are the most beautiful, tender, and clear; "*te-a-de-a-te-a-de-a,*" with the longest pause on the "a," where the quivering bell-tone becomes the most noticeable. These last notes are often uttered devoid of any other notes, making what we will call the second song, with a short but very pleasing character. Third song: "*chee-chee-a-chee-chee-che-a.*" Fourth song: "*tee-dee-che-a-che-a.*" The notes already described are not entirely restricted to songs, but are often uttered separately as if used for alarm or calls.

Again, it has a warbling chatter, used a great deal of the time when feeding, as if conversing with each other. The chatter is uttered with a full voice but not extremely so; the notes, from their round and steady flow, seem to run together; that is, from their character, one note is hardly distinguishable from the others. One might say the chatter is a reproduction of some of the song-notes usually

expressed in a lower and harsher key; still it is pleasant and cheerful.

Besides all the notes so far spoken of, the Canada Sparrow has two separate notes used for calls, alarm, etc. First: "*che-ep*;" well pronounced, the most stress on the "p." Second: "*te-e*;" much like the first but shorter and not as a usual thing uttered with so loud a voice. From careful study the writer believes that he has included all of the notes of our little northern boarder who pays his board with his songs.

If once you have heard the Tree Sparrow's songs, I know you will be watching for them in the last part of next fall when no more is heard the warblings of the birds that have flown far away to the southland. Yet Nature has provided that this bird shall sing to us after she has placed an icy seal on the brook, has robbed us for a while of the flowers, the foliage, and the green grass, has covered the earth with a thick blanket of snow; still these little birds are bright, active, and cheerful, vieing with each other in making the air respond with clear, liquid music.

THE RED-EYED VIREO.

BY WILL. N. COLTON, BIDDEFORD, ME.

The Red-eyed Vireo is a Summer resident here, and although I have seldom noticed it breeding in York County, nests of this species have been frequently found by the writer in Penobscot County in the northern part of the state.

The nest is usually rather neat and compact, still much variation is exhibited in this respect. One of the first I ever found, I remember, was so large and sprawling that I was at a loss for a time, to what species to assign the nest.

In 1887 I took a series of seven sets, the eggs varying little, in either size or markings; the reddish-brown dots being sprinkled without uniformity or plan, sparingly on the larger end. This is unlike the eggs of its fellow breeder,

the American Redstart; the markings on the eggs of the latter being wreathed.

The site I found to be invariably a bush, usually elder; preference being given to a sharp, upright crotch, which gives the nest a peculiar "squeezed" shape. Most of my nests were found while walking along secluded lanes or old cart paths.

The nest is constructed of grass and vegetable fibers; on the outside, bits of leaves and bark.

This Vireo has many curious and interesting traits, and a careful study of its habits will be well repaid. Its song is not the least of its charms; a sweet, though simple strain, suggesting brightness and joy on the part of the performer, and good will to all around.

HOW TO PREPARE EGGS FOR THE CABINET.

We give the method of blowing and preparing eggs for the cabinet from a letter recently received from one of the veteran collectors of the seventies.

We give only the extracts from his letter which relate directly to the instruments used and methods of use, together with his directions for constructing the same.

We have personally witnessed the use of them and they are certainly a decided improvement over the old method of blowing with the mouth.

He says, "I prefer glass blowpipes. I buy the glass tubing at a drug-store and use a spirit-lamp with a $\frac{5}{8}$ inch round wick and draw them out with points suitable for large, medium, or very small eggs. My experience with eggs that have been partially incubated is that holding the blowpipe outside of the drill hole, while blowing, is a good deal like feeling on the outside of a barn to tell how much grain it contains.

"The easiest and quickest way to blow eggs is with a blowpipe attached to a rubber bulb, having a valve in the opposite end. I think any one would appreciate a hand

blower after being 'humped up' for an hour or more, blowing away for dear life—eggs, I should say—on a lot of eggs that have been set on for four or five days, or long enough so the white has become thick and tough. After the eggs are blown they can be rinsed out very quickly with a Tater blowpipe, which has been described in a number of amateur papers. Small, fresh eggs can also be blown with it. I can assure the readers of THE WILSON QUARTERLY that it will be far easier than squirting water into an egg-shell, with one's mouth, through a blowpipe. After preparing seventy or eighty eggs at one sitting you will be ready to testify that it has saved you about half a ton of face-ache.

"I made my washer five years ago. I will describe it and the hand blower. I might also add that the total cost of both was about one dollar.

"I took a tin bucket, that holds about one and one-half gallons, to a tinker and had a small tin tube, two inches long, inserted in the side close to the bottom, and a wire bent like the letter U soldered on the side of the bucket so it would project an inch above the rim. Then I bought two feet of ¼ inch rubber pipe and slipped one end on the tin tube, into the other end I inserted a glass nozzle—of which I have two sizes.

"When I wish to use it I hang it up over the work bench so that it cannot turn or swing, place the tube just behind the nozzle in the bent wire at rim and fill with water.

"For the blower I took the valve from the end of an atomizer and fitted it into one end of a rubber bulb; this bulb being heavier and more durable than the one from which the valve was taken. Into the other end of the bulb insert a small glass tube. Before doing this I made a stand for the blow pipe by taking a block of hard wood one inch thick, four inches wide, and five inches long; set a post in it —near one end—four inches high and one inch by three-quarters. The post inclines several degrees from perpendicular towards the shorter end of the block. Near the top of the post bore a hole slanting so that when the blow-

pipe is in position it will be at an angle of forty-five degrees. This prevents the water or the contents of the egg from running back and making a muss on the bench.

"Whenever I have any eggs to attend to, I take a basin with a little water in it and place the stand beside it, with the post overhanging the edge. Then push a blowpipe through the hole in post and couple it to the tube in bulb with a piece of small, thin rubber tube, perhaps an inch long. I like this arrangement better than sticking the bulb on the end of the blowpipe for two reasons: it is easier, and it does not wiggle the pipe and endanger a fragile egg. It takes about two minutes to set up and take apart the whole concern.

Of course such an outfit is not practicable for blowing in the field. I have now two perfect glass blowpipes that I have carried over ten thousand miles in cars and in stage."

REPORT OF THE COMMITTEE ON MIGRATION AND DISTRIBUTION.

The reports received are of such a varied character that it has been found impossible to present this report in any thing but a general way. Before a systematic report can be made on the migrations it will be necessary to gather in a greater and more carefully prepared mass of notes. It is but fair to say that a large number of the notes used in this report were sent in response to a circular issued, calling for general rather than specific notes.

In the present report an attempt has been made to trace the distribution of each species east and west, north and south, without burdening the report with a mass of details. We have not sought to accomplish any thing beyond estimating the Fringilline fauna of each locality from which notes have come, and the relative abundance of each species. With the small number of localities represented nothing more than an approximation of the geographical distribution can be presented. In the report which is to follow we hope to have every state east of the plains

between the Gulf and Ocean, and the Lakes represented. If this be accomplished we shall be able to trace each species from north to south, and from east to west wherever it is to be found, with a comparison of its distribution in every state.

The present report contains notes from Texas, Iowa, Wis., Ills., Ohio, Penn., N. Y., Conn., N. Carolina. I wish to express my gratitude to the gentlemen who have contributed notes to this report giving it whatever of value it may possess: Messrs. John A. Donald, Texas; Reuben M. Strong, C. P. Howe, J. N. Clark, Allan W. Carpenter, Wis.; F. A Gregory, F. M. McElfresh, Ills.; J. Warren Jacobs, Penn.; D. D. Stone, N. Y.; John H. Sage, Conn.: S. W. P Smithwick, N. Carolina. Notes have also been received from Frank L. Burns, Berwyn, Penn.; H. P. T. Weathern, West Farmington. Me.; Willard Eliot, Thonotosassa, Fla. These notes are reserved for the report which is to follow upon the more specific migration and distribution.

We desire a complete list of the Fringillidæ from every member, with the statement as to whether it is a migrant (T. V.), summer resident (S R.), winter visitant, (W, V.), resident, (R.), or accidental visitor (A. V.); and also the abundance of each species. With these general notes send any and all notes upon migration, giving exact dates in every case, and also notes upon breeding. *We want exact notes!*

514. *Coccothraustes vespertina.* Evening Grosbeak.

This Grosbeak is known as a wanderer: occurring in a place in great numbers at one time and not being seen again perhaps for years. And yet there are localities where it may be expected to pay nearly regular winter visits. Mr. Strong finds it to be an irregular winter visitor near Milwaukee, Wis., being seen from Oct. 15 to rarely as late as Apr. 18, usually in small numbers. Mr. J. N. Clark reports it to be a common W. V. from Nov. to Mar. at Meridian, Wis. Mr. McElfresh captured a female Mar. 18, 1891, at Champaign, Ills. At Grinnell, Iowa, I have seen

but few. A small flock was seen during the spring migration of 1886 and a single flock of twenty Dec. 11, 1886, but none since. At Oberlin, O., the bird is an A. V. (accidental visitor.)

515. *Pinicola enucleator.* Pine Grosbeak.

Although not accidental like the last, nor of wandering habits, this is yet not a well known bird to our observers. It appears from the extreme north only during cold winters. Mr. Strong considers it rare at Milwaukee, Wis., while Mr. Clark, at Meridian, Wis., finds it to be common from Dec. to Mar. Mr. D. D. Stone also finds it common at Lansing, N. Y. At Grinnell, Ia., it is rare, but few specimens having been taken. At Oberlin, O., it is also a rare W. V.

517. *Carpodacus purpureus.* Purple Finch.

The Purple Finch is pretty well known to all observers. Its song, no less striking than its rich colors, makes it a conspicuous object of the woodland. Mr. Strong considers it an irregular T. V. at Milwaukee, and rare. But Mr. Clark records it as a common migrant at Meridian. Mr. Gregory finds it at Rockford, Ills. Mr. D. D. Stone finds it a common S. R. at Lansing, N. Y. Mr. J. W. P. Smithwick finds it a common T. V. as far south as Sans Souci, N. C. Mr. John A. Donald says that it is accidental at Decatur, Texas. Both at Grinnell, Iowa and Oberlin, O., I have found it a common T. V., often associating with Goldfinches.

521. *Loxia curvirostra minor.* Am. Crossbill.

All observers consider this species rare. It is a hardy bird, and, like the Evening Grosbeak, is much of a wanderer. Mr. Strong says that it is irregular in winter, some times occurring in great numbers, at Milwaukee; Mr. Clark finds it a rare W. V. at Meridian; Mr. Carpenter enters one Apr. 11, 1891, on the authority of Mr. E. P. Carlton at Madison, Wis. Mr. Stone marks it "rare W. V." at Lansing, N. Y. It is not common either at Grinnell, Iowa or Oberlin, O., though there are usually a few seen each winter.

522. *Loxia leucoptera.* White-winged Crossbill.

Both Strong at Milwaukee, and Stone at Lansing, N. Y., find this bird a rare W. V. In Iowa and Ohio it is also a rare W. V., not as well known as the preceding. It seems to be almost an unknown quantity among observers.

528. *Acanthis linaria.* Red-poll.

Another northern species which visits our northern observers only during the coldest weather. Mr. Strong found it common during the winter of 1889-90, but none 1890-91. Messrs. Clark at Meridian, Wis. and Stone, at Lansing, N. Y., find it abundant from Nov. to Feb. Red-poll comes sweeping into central Iowa in immense flocks during cold stormy weather. I have seen hundreds on the weeds by the roadside while snow was being driven by a north-west gale. At Oberlin, O., it is only a tolerably common winter visitor.

529. *Spinus tristis.* Am. Goldfinch.

Who does not know the Goldfinch? The variety of its local names suggests familiarity. It is the "Flaxfinch," "Thistle-bird," "Wild Canary," "Yellow-bird," "Lettuce-bird," Salad-bird," "Sunflower-bird." It is an ornament to every door-yard. It is an abundant S. R. at Madison and Milwaukee, Wis., and an abundant resident at Lansing, N. Y. At Meridian, Wis. Mr. Clark finds it common all the year, as it also is in Iowa and Ohio. It is perhaps more common during the summer. In Ills. it is common with Mr. Gregory. At Sans Souci, N. C., Mr. Smithwick finds it during the winter only; while Mr. Donald, at Dacatur, Texas, says, that while some individuals remain all winter, the most go further south, all coming from the north. At the last two mentioned stations Goldfinch would naturally not remain to breed but migrate north; but at all the other places we should expect it to be resident. It may not be out of place to mention the fact that Goldfinch changes his plumage to a plain drab in winter, and that his general appearance and even his voice is often so different from his summer habit that he might easily be mistaken for some other sparrow. To you more

northern observers who have hitherto found him only in summer allow me to suggest that it would be of great interest to make a careful study of Goldfinch and see if you do not find him in winter also.

533. *Spinus pinus.* Pine Siskin.

This is one of the little known but interesting sparrows, rather northern in its habitat. Mr. Strong finds it irregularly at Milwaukee, Wis. Mr. Stone records it as tolerably common in winter at Lansing, N. Y. It is common during the migrations both at Grinnell, Iowa and Oberlin, O. Its song once learned, there is no difficulty in recognizing it.

534. *Plectrophenax nivalis.* Snowflake.

Of all the sparrows, Snowflake is undoubtedly the one which we are most glad to see. Sweeping down upon us like the advance guard of an army, themselves the forerunner of the driving snow-storm, they are life in the death cold. Their songs are like angel voices from the black angry clouds. It is truly an inspiration to watch an immense flock, such as sweeps down upon Milwaukee and Meridian, Wis., and Lansing and Pittsburgh, N. Y., as it swirls and eddies in the van of the storm among the first falling flakes. In Ohio I have never seen such a sight, but in Iowa it is not rare. Their southern range is about 39°, rarely they have gone as far as 35°; hence our southern observers could hardly expect to find this interesting sparrow at their homes.

536. *Calcarius lapponicus.* Lapland Longspur.

It is commonly considered to be true that Snowflake is replaced by this Longspur at the south; but there is no note made of it by Southern observers. Doubtless they are too far south. It is an irregular winter visitor at Milwaukee, but common at Meridian, Wis., from Oct. to Apr. in stubble fields, occurring in large flocks. It is also common at Grinnell, Iowa, during the winter, but rare at Oberlin, O.

537. *Calcarius pictus.* Smith's Longspur.

This Longspur seems to have escaped our observers entirely. It is so common at Grinnell, Iowa, during the winter and late into the spring that it is a conspicuous

feature of the bird fauna. Its note is destinctive, and its colors attractive. I find a note in the *O. & O.* Vol. XIII, p. 95, of the capture of two specimens of this Longspur at Garretsville, O., Jan. 29, 1888, by Mr. Clark P. Streator. The note is interesting from so far east.

538. *Calcarius ornatus.* Chestnut-colored Longspur.

If we would learn more of this interesting Longspur we must work on the plains, for it very rarely reaches the Mississippi river in its eastern movement. Mr. Donald finds it in winter as a common bird at Decatur, Texas. Once only have I found it at Grinnell, Iowa; during the spring of 1887 when there seemed to be a general eastward movement of all species. Then a flock of several hundred remained about Grinnell for several weeks. Many were in full plumage and full song.

539. *Rhynchophanes mccownii.* McCown's Longspur.

Like the last this is a bird of the plains. Mr. Donald finds it abundantly at Decatur, Texas. It was one of the species which wandered east during the spring of 1887, reaching Grinnell, Iowa, March 3. The flock of about 20 departed the 8th.

540. *Poocætes gramineus.* Vesper Sparrow.

As we have reason to expect, this wide-spread species is pretty fully reported upon, and is evidently well known to all. It is an abundant summer resident at Milwaukee, Meridian, and Waukesha, Wis., as reported by Messrs. Strong, Clark, and Howe, also at Lansing, N. Y. But only common at Madison, Wis., Waynesburgh, Penn., Rockford, Ills., and Grinnell, Iowa; while at Decatur, Texas, it is only a tolerably common winter visitor. It is abundant at Oberlin, O., during the migrations, but I have not found it breeding.

542a. *Ammodramus sandwichensis savanna.* Savanna Sparrow.

At Meridian and Madison, Wis., this is a rare summer resident. At Lansing, N. Y., common; at Portland, Conn., as found by Mr. John H. Sage, common in summer but abundant in fall; at Sans Souci, N. C., tolerably common

in winter; and at Decatur, Texas, tolerably common. I have found it to be common both in Ohio and Iowa, as a summer resident.

545. *Ammodramus bairdii*. Baird's Bunting.

For this interesting bunting there are but two records. Mr. Donald considers it a common migrant in Texas, and I have found it at Grinnell, Iowa. It is another of our birds which inhabit the plains.

546. *Ammodramus savannarum passerinus*. Yellow-winged Sparrow.

It is surprising that a bird of such wide distribution as this one should be so little known. All observers consider it rare. At Waynesburgh, Penn., and Portland, Conn., it is a rare S. R.; and at Decatur, Texas, a rare migrant. Mr. Gregory finds it at Rockford, Ills. It is not common at Oberlin, O.; but really abundant in central Iowa. Its song is distinctive.

547. *Ammodramus henslowii*. Henslow's Sparrow.

Another obscure bird of the Miss. Valley. It is a common summer resident at Grinnell, Iowa. It will doubtless be found by observers in Ills., Wis., Mo., Kan, and Neb. Its delicate little voice is easily drowned by the louder prairie voices.

548. *Ammodramus leconteii*. Leconte's Sparrow.

This is also a Miss. Valley species, being found in Ills., Mo., Kan., Neb., Texas and the states bordering the Miss. river. It is not uncommon in central Iowa.

549. *Ammodramus caudacutus*. Sharp-tailed Sparrow.

Mr. Donald was so fortunate as to capture this bird at Decatur, Texas, Jan. 28 and 29, 1890. It was accidental there, since the species is confined to the S. E. Atlantic and Gulf states.

549a. *Ammodramus caudacutus nelsoni*. Nelson's Sparrow.

Mr. Sage is the only observer who has found this sparrow, strangely enough at Portland, Conn., when it is considered a Miss. Valley bird. He finds it only as a migrant in Sept. and Oct.

549b. *Ammodramus caudacutus subvirgatus*. Acadian Sharp-tailed Sparrow.

Like the last, the one record is from Mr. Sage, Portland, Conn. It is a rare migrant, found only in Sept. and Oct.

550. *Ammodramus maritimus*. Seaside Sparrow.

Mr. Smithwick is the only observer to record this maritime species. He finds it rarely at Sans Souci, N. C. in winter.

552. *Chondestes grammacus*. Lark Sparrow.

It is interesting to notice the eastern limit of this species. At Waynesburgh, Penn., it is rare; at Oberlin, O., not common: at Rockford, Ills., and Milwaukee, Wis., common; and at Grinnell, Iowa, and Decatur, Texas, abundant. Messrs. Clark, Carpenter, and Howe consider it rare in Wis.: doubtless they are in an unfavorable position to study it. We thus see that the true home of the Lark Sparrow is the Miss. Valley, breeding everywhere.

553. *Zonotrichia querula*. Harris's Sparrow.

It is unfortunate that there are not fuller notes upon this, the largest of our sparrows. It would be interesting to trace its range from east to west. Unlike the last, this bird does not breed within our limits. At Meridian, Wis., Mr. Clark says it is a "straggling T. V." In central Iowa it is a common T. V., while at Decatur, Texas, it is an abundant W. V.

554. *Zonotrichia leucophrys*. White-crowned Sparrow.

This species is also more common west and north than in the extreme east and south. Mr. Sage says that it is a rare migrant at Portland, Conn., and Mr. Donald does not consider it common at Decatur, Texas. Messrs. Strong and Clark report it as a common migrant in Wis., and Mr. Stone as the same at Lansing, N. Y. In Iowa it is common both in spring and fall, but much less common in Ohio.

558. *Zonotrichia albicollis*. White-throated Sparrow.

This is one of the well known sparrows throughout nearly the whole range of our observers. It is a true migrant except in its extreme southern range, where it remains all winter. Strong and Carpenter report it abundant in Wis.,

Gregory and McElfresh common in Ills., Sage common in Conn., Smithwick common in N. C., but Donald rare in Texas. It is abundant both in Iowa and Ohio.

559. *Spizella monticola*. Tree Sparrow.

There is no more familiar figure of the winter landscape than the Tree Sparrow. It is interesting to note how far south we may expect to find him. Messrs. Strong, Clark, and Carpenter report it as abundant in Wis., Jacobs abundant at Waynesburg, Penn., Stone common in N. Y., and Sage common in Conn. Mr. Strong is the only observer who does not find it all winter. It is abundant all winter in both Iowa and Ohio. Thus we see that our more southern observers have not found it at all, and yet it is usually found as far south as 34°. Mr. Donald is just below its southern range.

560. *Spizella socialis*. Chipping Sparrow.

All except Mr. Donald send reports upon Chippy. Every where it is "conspicuously present" and well known. Four observers from Wis.—Strong, Clarke, Howe, Carpenter—report it as abundant. Messrs. Gregory and McElfresh find it common in Ills., Mr. Jacobs says it is abundant in western Penn., Mr. Stone says the same for N. Y., while Mr. Sage regards it as only common in Conn. All of the above observers report it as a summer resident. Mr. Smithwick finds it all the year at Sans Souci, N. C. In Iowa and Ohio it is an abundant S. R.

561. *Spizella pallida*. Clay-colored Sparrow.

This bird is so easily confounded with other species of this genus that one might easily overlook it. I found it rather common at Grinnell, Iowa, but secured no positive evidence of its breeding in the vicinity. It doubtless does further west and north. This is one of the Miss. Valley species.

563. *Spizella pusilla*. Field Sparrow.

This sparrow is one of those upon which nearly all agree; and the disagreement, when there is any, is due to the difference of geographical situation rather than to any inconstancy of the bird itself. Messrs. Clark, Carpenter, and

Howe agree that it is abundant in Wis., but Mr. Strong regards it as only common at Milwaukee. Mr. Gregory finds it in Ills.; Mr. Jacobs says it is abundant in western Penn.; Mr. Stone, common in N. Y.; Mr. Sage, common S. R., rare R., in Conn.; Mr. Smithwick, common R. at Sans Souci, N. C.; Mr. Donald, abundant W. V., common R., at Decatur, Texas. It is a very abundant S. R. both in Iowa and Ohio. Thus we see that, northerly, it is a summer resident, while at the south, and even in Conn., some individuals are found during the whole year.

567. *Junco hyemalis*. Black Snowbird; Junco.

We naturally associate Junco and Tree Sparrow together; but their range is not just the same, as will be seen from the following reports: Messrs. Strong, Clark, Howe, and Carpenter report it as abundant in Wis., Messrs. Gregory and McElfresh find it in Ills.; Mr. Stone says it is abundant in N. Y. All of these gentlemen report it as a migrant. In Iowa and Ohio it is the same. But Mr. Smithwick finds it commonly all winter at Sans Souci, N. C., and Mr. Donald says it is abundant all winter at Decatur, Texas. Thus its wintering limit is below that of Tree Sparrow, and consequently its southern range is further south.

580b. *Peucæa ruficeps eremœca*. Rock Sparrow.

This rare south-western sub-species is recorded by Mr. Donald as accidental at Decatur, Texas. It has been found at other places in Texas also.

581. *Melospiza fasciata*. Song Sparrow.

So well known a sparrow as this calls forth reports from every quarter. We can hardly get beyond its range this side of the mountains. Messrs. Strong and Carpenter report it abundant all summer in their localities in Wis., but Messrs. Clark and Howe consider it only common. Mr. Gregory is well acquainted with Ills. birds. Mr. Jacobs says it is an abundant S. R. but rare R. at Waynesburgh, Penn.; while Mr. Stone says it is an abundant S. R. only in N. Y. Mr. Sage lists it "R. common S. R." Mr. Smithwick finds it only in winter in N. C., and Mr. Donald

as a migrant in Texas. It is an abundant S. R., never R., in both Iowa and Ohio in the northern part.

583. *Melospiza lincolni.* Lincoln's Sparrow.

The similarity of this species to the last, together with its scarcity in many places, causes it to be pretty generally overlooked. Mr. Stone thinks he has found it as a rare S. R. at Lansing, N. Y. Mr. Donald finds it a rare migrant in Texas. I have found it tolerably common in Iowa, but uncommon in Ohio.

584. *Melospiza georgiana.* Swamp Sparrow.

The numbers in which Swamp Sparrow is found seems to depend upon the local surroundings. Thus, in Wis., Messrs. Strong and Carpenter, at Milwaukee and Madison, find it an abundant S. R.; while Messrs. Clark and Howe, at Meridian and Waukesha, find it only common. So also Mr. Jacobs records it as rare in western Penn., while it is common in Ohio, and common also with Mr. Stone in N. Y. Mr. Sage records it as abundant in Conn. Everywhere thus far, and in Iowa, it is a S. R.; but Mr. Smithwick finds it only in winter in N. C.

585. *Passerella iliaca.* Fox Sparrow.

Another well known bird of wide distribution. Messrs. Strong and Clark say that it is a common migrant in Wis.; Mr. McElfresh finds it in Ills.; it is a common migrant in Iowa and Ohio; Mr. Stone says it is rare in N. Y.; Mr. Sage that it is common in Conn.; Mr. Smithwick finds it common in winter in N. C.; and so does Mr. Donald in Texas. It breeds north of our borders.

587. *Pipilo erythrophthalmus.* Towhee; Chewink.

North of Texas Towhee is only a summer resident. In Texas Mr. Donald says it is found only in winter. In Iowa it is abundant, and also in Ills., according to Messrs. Gregory and McElfresh. In Wis. it is abundant at Madison (Carpenter), common at Waukesha (Howe), and Meridian (Clark), and tolerably common at Milwaukee (Strong). In Ohio it is abundant; but Mr. Stone says of it, "very rare S. R. in N. Y."

593. *Cardinalis cardinalis.* Cardinal.

This interesting species scarcely comes far enough north to be seen by many of our observers. It is resident wherever found. I have seen but one at Grinnell, Iowa. Mr. McElfresh finds it common in Ills.; and it is common in Oberlin, O. Mr. Donald says of it at Decatur, Texas: "Common S. R.: more common in winter."

595. *Habia ludoviciana.* Rose-breasted Grosbeak.

Our southern observers do not find this Grosbeak at all. In Iowa it is abundant in summer. All four Wis. observers list it as abundant S. R.; likewise Gregory and McElfresh in Ills. Mr. Stone says it is a rare S. R. in N. Y. In Ohio it is common all summer.

597. *Guiraca caerulea.* Blue Grosbeak.

This southern Grosbeak has been found by Mr. Donald as a rare S. R. at Decatur, Texas. It migrates north to southern Ills.

598. *Passerina cyanea.* Indigobird.

Another species unknown to the southern observers, but a conspicuous figure in northern woodlands. Messrs. Strong and Clark say that it is a common S. R. in Wis.; Mr. Carpenter finds it rare at Madison. Mr. Gregory finds it in Ills. In Iowa it is a common S. R.; not so common in Ohio. Mr. Stone says it is a common S. R. in N. Y.

601. *Passerina ciris.* Painted Bunting; Nonpareil.

The range of the Nonpareil closely corresponds to that of the Blue Grosbeak. Mr. Donald finds it a common S. R. in Texas.

604. *Spiza americana.* Dickcissel.

The records for this very interesting little bunting are few indeed. It is decidedly more numerous west than east. In Ohio it is a rare S. R. Mr. Gregory finds it in Ills. Mr. Strong records a single specimen taken near Milwaukee by Mr. Akely, June 9, 1890. In Iowa Dickcissel is our most abundant bird. Mr. Donald records it as an abundant S. R. in Texas. The range of this bunting is changing. It will be interesting to note its progress.

605. *Calamospiza melanocorys*. Lark Bunting.

We have only Mr. Donald's record for this bird of the plains. At Decatur, Texas, Mr. Donald says it is rare. It has never been found in Iowa.

LYNDS JONES,
Chairman of Committee.

Mr. Frank L. Burns is preparing a very interesting and valuable report for the Oological Committee, of which he is the chairman.

CONSTITUTION OF THE WILSON ORNITHOLOGICAL CHAPTER, A. A.

ARTICLE I. Name.

The Wilson Ornithological Chapter of the Agassiz Association.

ARTICLE II. Object.

The promotion of American Ornithology and Oology by systematic investigation and the publication of the results.

ARTICLE III. Membership.

Membership shall consist of Active and Associate members.

Active members only can vote and hold office.

Any student of birds in the United States may be admitted to Associate membership by the President.

Active members shall be limited in number by the Executive Council; provided that the number shall not exceed one hundred, or be limited to less than twenty-five, except by a majority vote of the Active members.

Active members shall pay annually, in advance, one dollar to the Secretary of the Chapter, for which amount they shall receive the official organ and all publications of the Chapter.

Active members may be admitted semi-annually by a majority vote of the Active members, after recommendation by the Executive Council.

Application for Active membership should be made to the Secretary.

Non-payment of dues for one year shall cancel their name from the roll of Active membership.

50 cents shall be charged Associate members.

ARTICLE IV. Officers.

The officers shall be a President and a Secretary, to be elected annually.

The President shall have the general management of the Chapter, direct the investigations and prepare the results for publication in such forms as directed by the Executive Council, and appoint all committees, with the exception of the Executive Council.

The Secretary shall perform the customary duties of such an officer, and prepare the necessary reports of the Chapter.

ARTICLE V. Executive Council.

The Executive Council shall consist of the President, who shall be chairman, ex officio, the Secretary, and three other Active members elected annually.

The Council shall act upon all motions, petitions, and plans not conflicting with this Constitution, and on matters referred to them elsewhere in this Constitution.

ARTICLE VI. State Division.

Organizations of all the members of the Chapter in any state may be perfected when ten members are enrolled from that state.

These Divisions may elect their own officers and make their By-Laws, provided that the By-Laws are approved by the Executive Council.

The President of each Division shall, under the direction of the President of the Chapter, have charge of the investigations in that state.

ARTICLE VII. Expulsions.

The Executive Council shall constitute a committee which shall have power to expel any member who is proved unworthy of membership.

The decision of the Executive Council can be over-ruled only by a two-thirds vote of the members in good standing.

ARTICLE VIII. Amendments.

This Constitution may be amended at any time by a two-thirds vote of the members in good standing.

LYNDS JONES, President. J. WARREN JACOBS, Secretary.

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EDITORIAL.

In assuming control of the official organ of the chapter, the members have virtually agreed to support the paper, if it should not prove self-supporting, until such time as it shall pay its own way. There is no better way of giving it support than by seeking to advertise it as widely as possible by soliciting subscriptions. There is no reason whatever why the July issue should not have a circulation of 500 copies if each member will make even a moderate effort to secure subscriptions. The business manager and editor will naturally be expected to do much more than any other members, but they cannot do it all.

Our paper is a credit to the chapter, and has been highly spoken of by the *Auk*, the leading journal of Ornithology in America. No effort will be spared to make each issue more excellent than the last.

It cannot be a money-making scheme for any one, because the magazine is the property of the organization. Hence its managers must render their accounts to the chapter as a whole, as its owner.

Let each member enter into the work heartily, determined to make our paper second to none in the field which it occupies.

The excellence of the paper will depend upon the interest taken in preparing articles, notes, and reports for its pages. We cannot offer each other prizes for best articles, but we can offer the first place and honorable mention to the best report which is forwarded to the President during the coming summer.

THE WORK FOR 1892.

In the January issue of *The Taxidermist* we announced the scheme for work during the coming season. The group of Owls was selected not because it might prove interesting to all, but because it seemed too little known by very many members. The object always in view is to direct study in such a way and along such lines as will bring the most that is new and valuable to the greatest number.

Thus far the lists that have come in have been good ; but there should be more of them. Every member should not fail to make out his list and send it to the President at once if he has not done so already.

In order that all may not fail to understand what the work is, we copy the scehme from *The Taxidermist.*

"1st. As soon as you have read this make out and send to the President of the chapter a list of all the *owls* known in your locality, noting whether each is a resident, summer resident, transient (or migrant), or accidental. Whether abundant, common, tolerably common, or rare. Whether it breeds near you commonly, rarely, or not at all.

"2d. Study its habits carefully, noting where it stays ; what is its food ; whether it flies during the day ; whether it is harassed by crows and jays ; whether it approaches dwellings ; how it is affected by weather ; what is its cry ; study its courtship.

"3d. Breeding habits. Note : Whether it builds a nest or not ; when it begins to build or lay. To what extent it

appropriates old nests. Where is the nest situated. Proximity to dwellings. Actions when its nest is disturbed. Whether its cry is different than at other times. Study carefully all about the eggs; number, size, shape, color. Period of incubation. Whether the male assists in nidification. How long the young remain in the nest after hatching. What is their food. Whether they differ from the old in color. Whether there are marked phases of plumage during development.

"4th. Habits after the breeding season closes. Note: How long families remain together. When the moult begins; when it ends. How the birds employ their time. Economic bearing: Relations to poultry; to rodents; to insects.

"Whatever other points not given above occur to you, or appear as you proceed with your study, do not fail to make a note of them."

The benefit of the season's work to you will be measured by the earnestness and faithfulness of your own individual work.

NOTES.

Mr. Maxfield, the former publisher of the *Semi-Annual*, has found it impossible to publish the October number. His business was such that time could not be given to the paper. All will be sorry that this is so. To make good the loss we will forward to each member any back number of the *Semi-Annual*, or an extra number of the QUARTERLY, at their option.

We take pleasure in calling the attention of all to the work of Capt. Chas. E. Bendire, Smithsonian Institute, Washington, D. C. The Capt. is preparing the life histories of North American birds, accompanied by plates of eggs, especially of the rarer species, and many illustrations. He desires information from all who may have interesting notes upon any species included between A. O. U. 382 and

the Juncos. Already the first volume is in press and will be ready for distribution by Sept. next. It contains 414 pages of text, with index, etc., making the whole volume about 450 pages. Samples of the text may be found in the *Forest and Stream*, of Jan. 14, and Feb. 25, 1892, on Gamble's Partridge and Bald Eagle. All should be interested to contribute notes toward this work.

Any one who contemplates entering upon any work should ask himself: "Of what benefit will it be to me? Will it pay for the effort expended upon it?" If, after careful consideration, he decides to undertake it, he may reasonably expect that he shall receive interest upon whatever capital he may have put into it, provided he exert himself sufficiently to make it bear interest.

Many who contemplate entering into the work of any organization like the Wilson Chapter, may ask: "In what lies the advantage of membership in this over any other similar organization? Is there any advantage?" We do not presume to say in regard to the Wilson Chapter. Very likely it presents no advantages over other similar organizations. Its method is simply co-operation in study. Those who constitute the organization largely determine, each one for himself, the value of the organization as an aid in the study of our favorite science. Each worker has the advantage of becoming acquainted with the results of the work of all the others, and better than that, with the *methods* of work of each one. The best work is always systematized. If each of us will give careful attention to the forth-coming reports upon the various groups of birds, and to all that have been presented, we shall be able to select fron each one some points of excellence which may enter into our own method and be of value to us.

A great advantage of our work is that it extends over a very large area—from Canada to Florida, California, and Minnesota. Not all, indeed, very few, of the intervening places are now represented, especialy the west and north; but these extremes always give us the extremes of variation. As new members come in, filling up the centre, as

they do constantly, we shall not only have the extremes of variations, but will also be able to trace the variation from extreme to extreme.

To those who are just entering the field, our system of investigation cannot but be of service, in that it teaches them how to study, how to observe and note things as they occur. To those who are already initiated, the organization is a benefit, in that it gives them a wider range of study—something beyond their personal range. To those who desire to gain position in the ornithological field it is an aid in gaining that position. It offers a channel through which they may make their work known to those who are the leaders. It stimulates them to better work. To those who are already masters of the science the system commends itself for its disinterestedness in personal elevation, as well as its scheme of wide co-operation, aiming to bring together, as far as possible, those who could not otherwise know each other.

That the work of the chapter is worthy the name is assured by the fact that those who are the most interested in American ornithology seek after our reports. We now have on our table requests from the leaders in the science for back numbers of the *Semi-Annual* in which reports have appeared. This is encouraging. The results cannot but increase in value as the methods become more and more systematized. At first what we did was but little more than an experiment, now we enter upon the work confident of the results.

We cordially invite all who are interested in our work to join our ranks and so have a part in it. For further information concerning the organization,—its membership, official organ, and other details,—we refer the reader to our advertising page.

PUBLICATIONS RECEIVED.

Ornithologist and Oologist. Vol. XVII, Nos. 1, 2, 3. Published by F. B. Webster Co., Hyde Park, Mass., at $1.00 per year. It is too well known to require mention here.

The Taxidermist. Vol. I, Nos. 4 to 9, 1891–2.
A twenty page monthly devoted to practical taxidermy, but treating on ornithology and oology, arranged alike for the amateur and the profesional naturalist. Subscription 50c. a year. A bright, well edited paper, steadily improving. Published by C. F. Mignin, Akron, Ohio.

The Collectors' Monthly. Vol. II, No. 12. Vol. III, Nos. 2 and 4. A monthly magazine devoted to Ornithology, Oology, and Entomology; consisting of twelve pages of interesting and valuable matter. Subscription 30c. a year. Published by Chas. H. Prince, Danielsonville, Conn.

The Empire State Exchange. Vol. III, No. 2.
A monthly for collectors. Published by Perrine Bros., Eden Valley, N. Y. 50c. a year.

California Traveler and Naturalist. Vol. I, No. 2. A monthly, official organ of the Audubon Chapter, Agassiz Scientific Association, published by N. L. Hertz & Co., Napa, Cala. Subscription 35c a year. A promising young magazine of the west.

FREMDE EIER IM NEST.

(ANOTHER BIRD'S EGGS IN THE NEST.)

An 8vo 122 pp volume recently published by Dr. Paul Leverkühn, C. M. A. O. U., C. M. Z. S., etc., of Munich. It is an unique work, printed in German in large type on good paper. It is offered for sale to Americans through the Dr's. agent, Mr. A. E. Pettit, Box 2060, New York City, at $2.00 per volume.

The author discusses at length and very carefully the behavior of the parent birds to eggs deposited by other birds

in their nest, or eggs put in by men. The work itself is given greater value by the copious foot-notes in which not only authorities are cited, but instances are given as proof of what he has said. American literature is freely refered to, showing the author's familiarity with ornithology and his wide range of knowledge. Even obscure journals are searched and the grains of gold picked out from the trash.

He is highly praised by his contemporaries as a man of keen wit, quick to see matters of interest, and yet cautious and painstaking in his work. The Dr.'s book is well worth the reading and we are glad to recommend it to all lovers of birds.—L. J.

PUBLISHER'S PAGE.

Looking back over the history of the chapter organs, we see the little *Curlew*, then the department in the *Semi-Annual*, and now the QUARTERLY, and are moved to say as the editor of one of our esteemed contemporaries in his review of the *Curlew* said: "Tail aches from little toe corns grow: David knocked Goliah out with a pebble, and the upsetting of a lantern laid Chicago in ashes. We never can tell what may result from small beginnings."

The QUARTERLY is not a money-making venture, but is supported by the chapter as its organ, and its publisher is merely a servant.

It is proposed to keep future numbers of the QUARTERLY equal in every respect to the present issue, and to make such improvements as shall be warranted by its success.

Receiving proper support from the chapter, with the good rates we have received from our printers, we are confident of success.

EXCHANGES AND WANTS.

Brief special announcements, "Wants" or "Exchanges" will be inserted in this department at the rate of 25 words for 25c.; more than 25 words at one-half cent per extra word. Notices which are indirect methods of obtaining cash purchasers cannot be admitted. No notice inserted for less than 25 cents. Terms, cash with order.

TAKE NOTICE!—I have a few fine sets of St. Domingo Grebe 1-4 and 1-5 for exchange @ $1.00 each. Sets or singles under 50c. desired.
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ATTENTION. RELIABLE COLLECTORS.—J. Warren Jacobs, Waynesburgh, Pa., will have, during '92, fine sets with complete data to exchange for same. Nests furnished when desired.

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COLLECTING IN THE GILA VALLEY.

BY F. T. PEMBER.

(Continued from page 6.)

Looking toward the cloudless sky we see several Turkey Vultures and large hawks floating lazily over its valley, while other hawks may be seen sitting upon dead trees and stubs. I either shot or saw closely Western Red-tail, Mexican Goshawk, Ferruginous Rough-leg, Swainsons, Sparrow and Sharp-shinned hawks, also White-tailed Kite. Have also seen Barn, Long-eared, Short-eared, and Pigmy Owls. On my last visit I felt anxious to secure as many specimens as possible of Leconte's Thrasher, but one seldom gets them even when seen, for they are very wild and on the ground run very fast, acting and looking, if only the back is seen, like the Sage Thrasher.

After several ineffectual long shots one day, I was returning, hot, dusty, and tired to the so-called hotel, by the shortest route across the desert; it was some time past sundown, and the place was two miles from the river bottom in a very open part of the desert and where I little expected to see a bird of any kind; but I did see one, runnning from one greasewood bush to another as lively as a quail, and a quick shot at long range, in the dusky twilight, proved effective. I did not then know what it was, and on going to it was de-

lighted and surprised to find a fine Leconte's Thrasher. I thought it strange that it should be found in such a locality. The next day I was out looking for more in the same place, as near as I could locate it, but I searched unsuccessfully for a long time. Gradually I worked my way nearer the bottom lands, and when almost on their border, though still in the desert, and where the ground was broken into low ridges, I saw plenty of this rare species. There must have been fully fifty, in a scattering flock, as we often see robins in September. My hopes were high now and I thought to get a dozen or more. But the birds were very wary, and ran from bush to bush, or took short flights, always designing to keep well out of gun shot range. At times as they ran under a low bush, I could have killed five or six at a shot had I only been nearer by one half the distance. I followed them about persistently as long as I could find one to follow, taking very long shots from time to time, and succeeded in getting just four out of the whole lot, by shooting ten or twelve times. Where they went to I never knew, as they seemed to scatter out in all directions, and I did not see another that day. I cannot understand why these birds should be so shy in such a country. Not so with the woodpeckers, however, for the Indians prize their feathers very highly, and have hunted them so persistently, particularly the Gilded Flickers, which are plenty here, that many of them will leave the cactus in which they live before you get within 200 yards of them.

I fear this article is getting too long, and will give some incidents of one day's shooting, and close.

On the morning of April 16th, 1892, I started early, with horse, wagon and driver, also plenty of water, hatchet, rope, etc., for a day's collecting across the desert, to the west of Gila Bend. No birds at first, but after a drive of a mile or more I saw a small bird drop over a little ridge of lava. Leaving the wagon, I went to the point where I saw it last. It had vanished, but in its place I flushed a fine pair of Texan Night-hawks, both of which I secured. I have taken a dozen or more about here, and all agree with each other and

with those taken further west, except one pair, which are very much paler than the others and may prove a new subspecies. These birds are found on the sand or on the bare volcanic rocks which are so hot it is difficult to hold the hand on them. And just now we see the absurdity of naming a new bird for a state or locality, for the Texan Nighthawk is the common and only Night-hawk of Arizona and California, while the Night-hawk *C. Virginianus* is the common and only Night-hawk over a large portion of Texas. Further on we cross an *arroyo* with high banks and see a number of swallows flying about them. We stop long enough to get three. They are of the Rough-winged species. Driving for some cactus we see several Gila Woodpeckers and Gilded Flickers leave them. Hiding behind a bush, as best I can, I await their return, and after waiting half an hour shoot one of the former, but the last named have been too well schooled to be caught in that way. While watching for them I saw a pair of Cactus Wrens feeding their young in the fork of a cactus, and fully 25 feet high. One of the old birds came with food every two or three minutes. I have found nests of this species almost by the hundred in some places, and except in one instance, all were in low branching cactus from three to five feet high. The exception was twelve feet high in an elder tree. But the cactus they love so well does not grow in this part of Arizona, and this nesting site only offers another instance of birds changing their habits to correspond with their surroundings. These were the only wrens of any kind that I saw. I now spend an hour or more for eggs and succeed in getting a fine set of Gilded Flicker and two sets of Gila Woodpeckers. For a long time I was puzzled how to get eggs from the cactus, as it needs a ladder twenty or thirty feet long; but I solved it at last and can climb any of them with the aid of a hatchet, though a rope is of great assistance. It is slow work at best, as many of the spines must be trimmed off, and notches cut in the trunk for hands and feet. A rope around the cactus and your own body gives you a better chance to work. In this case I made use of the wagon to give me a

start and then see how few spines I can take off and make the ascent. Found I could get over and around many of them, but several times before I got down again I wished I had taken off just a few more. While cutting into a woodpecker's hole a Pigmy Owl flew from a hole higher up; so I had to go to that, but found nothing for my trouble. Working nearer the river, among the mesquite trees, I get a few quail and shoot a Chaparral Cock from the wagon, with dust shot. I next took a rather long shot at a Ferruginous Rough-leg. Two or three feathers floated out in the air in one direction and the balance went off in a body in another. A Crissal Thrasher soon tried to fly across the road in front of us. A shot filled the air with feathers; but the bird kept on, finally falling in some bushes eighty yards away, where we found him after a long search.

Then I saw several Abert's Towhees and got two of them. My next find was not in the line of ornithology, but was what is called a Gila Monster—one of the largest of American lizards, though perhaps not large enough for the name. It is also known as Gila Horror, and the name "fits them like a glove." They are eighteen to twenty inches long, stocky, thick-set, heavy built fellows, beautifully colored in black and orange, and are as venomous* as rattlesnakes, and twice as ugly. They usually run away if they can, but stop them and tantalize them a little and they act like an enraged cat. Push a stick towards them and they will bite it fiercely, and after getting their teeth well into it, will "roll over" like a trained dog, so as to make the teeth tear and lacerate the wound. I tried "dust" on this one at twenty feet, but he wore a coat of mail, and it only stunned him. I supposed he was dead, and came near being bitten, as I went to pick him up by the tail. At the first touch he "changed ends" so quick I could scarcely see the motion, and it was no part of a second till the end of his nose was just where the tip of the tail had been. I had him repeat the performance several times, but with more caution. I skinned him that evening, and found it the slowest job of the kind I ever did, for the strong, wiry

*It has been discovered recently that the Gila Monster has no poison fangs.—Pub.

muscles of the flesh seemed to be fairly woven into the skin, so that it must be cut away very carefully at every point.

The best find of the day was the nest of the Mexican Goshawk. It was some 25 feet high in an old thick-branched mesquite. I shot the female as she left the nest which was another very rare specimen, and then tried to persuade my driver to go up to the nest; but he wasn't a climber, and "couldn't see it" in the light I did, so had to do it myself. These trees have very stiff wiry branches, covered with thorns, and the job I had getting to that nest I do not like to repeat often, though I would go through almost anything for another set of as rare eggs. The nest held three eggs entirely fresh, and about the size of those of the Broad-winged Hawk. They are white, slightly nest stained, and are obscurely marked with reddish-brown.

We took our lunch on the river bank under some large cottonwoods, stopping at times for a shot at a warbler, to listen to some distant bird note, or to watch some of the water birds along the river. I saw American Egret and a flock of White-faced Glossy Ibis, but too far away to shoot.

At length we turn our faces once more toward Gila Bend, shooting and hunting eggs on the way; but as it would be too much of a repetition to describe it, I will relate but one more incident of the day. We were well on our way back, and I was following up an *arroyo* with a surface of broken lava, and a growth of low trees and bushes with an occasional cactus, from which the woodpeckers would fly at my approach. My driver was following along the ridge outside so as to keep me in sight. Was having poor success with birds, when all at once came the sharp, buzzing alarm, or challenge of a monster rattlesnake. His head was towards me, raised a foot high, and he showed no disposition to try to get away. I tried to frighten him; but he would not scare, and watching every motion seemed to defy me to come nearer. A charge of shot quieted him, when I found that he was five feet and seven inches long and as large as a man's arm. Within five rods of this place I killed two more and heard three or four others in the bushes. I began

to think that they were too numerous about there; that I did not care particularly for any more birds that day; so started for the wagon, and drove back to town.

From this day's hunt I made good skins of thirteen Gambel's Partridge, two Chapparral Cock, one Mexican Goshawk, one Long-eared Owl, three Abert's Towhee, one Lucy's Warbler, one Pileolated Warbler, two Orange crowned Warblers, two Gila and one Baird's Woodpecker, three Phainopepla, two Texan Nighthawk, two Crissal Thrasher, three Rough-winged Swallow, and one Plumbeous Gnatcatcher; also the Gila monster. Besides I had several sets of very desirable eggs. Back at four o'clock. A bath is first in order to get off some of the dust and sand; then I measure and tag my specimens, work at skinning till past midnight, and finish the job in the morning.

Such is a partial account of a short collecting trip to this desert valley; and if any reader chooses to try it he may be sure of plenty of specimens, with much to please, interest, and instruct, and so much that is strange, weird, and seemingly unnatural; but the accomodations are sure to be of the poorest, and I fear he may find some things disappointing, unpleasant, and postively annoying.

THE PRAIRIE HORNED LARK.

(*Otocoris alpestris praticola.*)

LYNDS JONES.

More than a year ago* we began to tell the life history of the prairie form of *Otocoris*, promising to complete it another time. The seasons that have intervened have afforded us opportunity for further study, and we feel sure that no one will be the loser from the delay.

The present paper is concerned only with the courtship and nesting habits of these larks, leaving them when the summer moult begins.

Even in January, when the bright, warm sun has eaten holes in Winter's mantle, and the buds on the more for-

* *Semi-Annual*, Vol. II, No. 2, July, 1890, p. 27.

ward trees begin to swell, Otocoris becomes restless. As the warm spring days multiply, his "fancy lightly turns to thoughts of love."

Watch him as he sits on some elevated clod, uttering his peculiar little rattling song, and then darts away like a flash of light, you know not where nor for what. He has not gone far when up starts his intended mate, keeping just out of his reach ; now rushing straight ahead, now turning suddenly aside ; now up, now down, instantly followed by the ardent suitor. Soon she alights so suddenly that he passes completely over and beyond her, but wheels about and settles, fluttering and singing with all his might, at her side. Coyly she sidles off and feigns indifference, pretending to be feeding. The suitor becomes almost frantic ; with drooping wings and elevated head he displays his yellow throat above the black crescent, with comical art, fairly singing his soul away meanwhile.

The object of his affections is still provokingly indifferent. Vexed beyond endurance he springs up and dashes towards her. Away she darts like the wind, just at the moment when you expect a terrible collision! Then the chase begins again. Over and over the ardent suitor and the coy female play their parts, until she finally receives the attentions and caresses which are lavished upon her. Nor does love-making with the larks cease when the prize is won, but continues throughout the spring days, well into the summer months.

Often a second suitor appears upon the scene. Then the courtship just described is multiplied by two! The intervals between the mad chase are filled by challenges and feints of battle. If, after the proper time has passed, the female shows no preference, the issue rests upon a battle between the suitors. It is always short and decisive. The first suitor wins.

Unless the mate of the previous summer has been killed he is always the first and successful suitor. If he does not appear, two young fellows vie with each other for the first position in the affections of the female. If both appear at the

same time she usually shows a preference; but if she does not, a battle decides it. Females of the previous season, only a year old, who have not before had suitors, are often sought by old mates who have lost their mates or been unsuccessful in their love affairs. Usually such females show a preference. In any case a battle is the court of final appeal.

It may be asked if there are not sometimes more females than males. I have always found it to be the other way. If a female loses her mate she at once seeks another and always finds him!

No sooner is courtship over than the business of the household begins. Accompanied by her mate, the female selects a nesting place. Usually a location not many feet from a road or foot-path is chosen. Often, perhaps in the majority of cases, a gently sloping side hill is chosen; but I have found a great many nests on bottom-lands, and a very few on the hill-tops.

The location chosen, both birds set to work to hollow out a little space about three inches deep at the foot of a tuft of grass or some elevation to serve as a slight protection, but not large enough to be conspicuous; rather to divert than to draw attention.

In this slight hollow a scanty supply of fine, dry grass is arranged, the rim of the nest just appearing above the surface of the ground. But the material used is not always grass. If the nest is in a cornfield, the dry husks and leaves of corn are laid next the earth, with a lining of soft corn-silks above.

The general makeup of the nest differs at different times of the year. It is well known that the Horned Larks rear two or even three broods in a season. The first nest, which is made in February or March, would very naturally be more elaborate and warmer, while those made in July would be very slight. A nest is never used twice.

How long does it take a pair of larks to build a nest? That depends upon the weather, whether material is plenty, and whether they are in a hurry to begin house-keeping. A

week is ample time in which to build a nest. I have seen them built in two days. Wet or stormy weather is very unfavorable, since the nest must be on the ground. It is not seldom that a nest is completed some days before any eggs are deposited. And on the other hand, it is not very unusual to find single eggs which have been dropped because no nest was ready to receive them.

In fair weather, as soon as laying begins, an egg is deposited each day ; but if a cold storm should occur before the set is completed, a day or even two, in extreme cases, may intervene between the times of depositing two eggs successively.

Early in the season four eggs make a complete set, though three are often found. Later, when warm weather is coming on, only three, seldom four are laid. Nests in July often contain only two. At any time of year four eggs is the largest number laid.

The eggs are usually elongate ovate in form, sometimes being even a short ovate; and resemble somewhat, in color and markings, eggs of the Brown Thrasher. But there is always a certain difference, difficult to define. In color they are grayish white, never greenish, as is the case with Brown Thrasher not infrequently. The normal egg is spotted and blotched pretty evenly over the entire surface with brown of different shades, giving the impression of heavy markings. Often the markings are so heavy as almost to hide the ground color. In a few instances I have found eggs with a distinct wreath about the larger end, but the remainder of the egg was marked as usual with browns, the wreath being simply confluent blotches and spots.

In size the eggs range from .80 x .60 to .94 x .67. The average egg is .86 x .63.

Setting does not always begin immediately upon the completion of the set of eggs. Frequently, especially in fair warm weather, the birds take a holiday before settling down to real business. The female incubates, being supplied with food by the ever attentive male. After studying

the habits of the larks during this period of incubation, I have arrived at the conclusion that they are more than ordinarily intelligent.

When you approach a nest the male utters his usual call from his watch-tower, giving a peculiar inflection to the last note. He is nowhere near the nest, by the way, and always happens to be in the same direction from the nest that you are. If you are searching for the nest you must now look sharp. As soon as the female hears that note she steps from the nest and walks quietly away, feeding as she goes. You may be on the opposite side hill from the nest when she leaves it; in which case you won't be very likely to find it. But if your eyes are good you may be able to catch sight of the female as she feeds. If you do, sit down and watch her, taking care to remain perfectly motionless. If you wait long enough, and the bird isn't too shy, you may be able to see her return to her nest.

If you should be so fortunate as to flush the bird from the nest, unless you were familiar with the habits of the birds, you would not know it. Casual observers of birds speak in glowing phrases of the art and maternal affection exhibited by the mother bird who leaves the nest fluttering and crying as though injured, trying thus to lead you a way from her nest. But look at this lark. As she suddenly finds you almost upon her she quietly steps from her nest, runs a little way, feeds unconcernedly, and finally flits away easily and calmly as you approach. Which is the more commendable art?

After careful study of a large number of nests, I found that the average period of incubation of our form of the Horned Lark is thirteen days. The conditions may be such that the bird may sit a day or two more or less. I doubt if any eggs are hatched in less than twelve days, and very few in less than thirteen.

The newly hatched young, which break the shell and come forth in exactly the same order that the eggs were laid, are covered with dirty gray down. This thickens as the days pass, and in about ten days the feathers have

well started. The down does not at once disappear, but persists after the feathers are well grown, sticking out between them in little tufts, giving the young bird a very comical appearance. Not longer than fifteen days after hatching, the young leave the nest and begin to "dig" for themselves.

It is exceedingly difficult to trace the life history of the larks after the nest is deserted. All that I have been able to discover is that in a remarkably short time the young become able to catch insects for themselves; when the old birds at once begin building another nest.

Not until late in August, after the birds of the last brood are well grown, is there a time for rest. Then the moult begins, and the birds seem to disappear.

THE AVI-FAUNA OF BROOME COUNTY, N. Y.

BY WILLARD N. CLUTE, BINGHAMPTON, N. Y.

In presenting the following list of the birds of Broome County, N. Y., it may be well to add a few notes on the position and topography of the section under review. Broome is one of the counties forming the "Southern Tier" of the State, and is situated near the centre of this tier. Its southern boundary is the state line—parallel 42°. There are no mountains in the county, the highest points being about 1700 feet above sea-level. It is watered by the Susquehanna and Chenango rivers and several minor streams. As there are no lakes or ponds of any size, we have but few water-birds. The chief waterway of the county—the Susquehanna—which, in part of its course, forms a natural highway for the migratory birds, here flows east and west, and many of the rare migrants have, doubtless, left it for a more direct route northward. The list given herewith is the result of six years' observations and makes no pretentions to completeness. The nomenclature is that of the American Ornithologists' Union. Except in a few instances, I have given the common name by which the bird is best known in the county.

1. **Urinator imber.** Loon.—Occasional migrant.

2. **Merganser serrator.** Red-breasted Merganser.—Common in spring and fall. Some winter.

3. **Lophodytes cucullatus.** Hooded Merganser.—Somewhat rare migrant.

4. **Aix sponsa.** Wood Duck.—Not uncommon in spring and fall. A few probably breed.

5. **Branta canadensis.** Wild Goose.—Not uncommon migrant. It seldom tarries with us but is often heard flying over at night.

6. **Botaurus lentiginosus.** Bittern.—Somewhat rare summer resident.

7. **Botaurus exilis.** Least Bittern.—Summer resident. About as common as the preceeding.

8. **Ardea herodias.** Great Blue Heron.—Rare; commonest in spring. As individuals are occasionally seen all summer they doubtless breed sparingly.

9. **Ardea virescens.** Green Heron.—Common summer resident; often breeding in communities.

10. **Porzana carolina.** Sora Rail.—Rare. Probably breeds, as immature birds have been taken in the county.

11. **Philohela minor.** Wood-cock.—Not uncommon summer resident.

12. **Actitis macularia.** Tip-up.—An abundant summer resident.

13. **Ægialitis vocifera.** Killdeer.—Rare. Occasionally seen in spring.

14. **Colinus virginianus.** Quail.—Not very common. Breeds.

15. **Bonasa umbellus.** Partridge.—Common resident, greatly outnumbering the preceeding species.

16. **Zenaidura macroura.** Mourning Dove.—Common summer resident.

17. **Circus hudsonius.** Marsh Hawk.—Not uncommon. Probably breeds.

18. **Accipiter cooperi.** Cooper's Hawk.—Common summer resident. Breeds.

19. **Buteo borealis.** Red-tailed Hawk.—Not uncommon. Breeds.

20. **Falco sparverius.** Sparrow Hawk.—Common summer resident.

21. **Pandion haliaetus carolinensis.** Osprey.—Occasionally seen all summer; may breed.

22. **Nyctala acadica.** Saw-whet Owl.—Not uncommon resident.

23. **Megascops asio.** Screech Owl.—Tolerably common resident.

24. **Bubo virginianus.** Great Horned Owl.—Not uncommon resident.

25. **Nyctea nyctea.** Snowy Owl.—Occasional winter visitant.

26. **Coccyzus erythrophthalmus.** Black-billed Cuckoo.—Common summer resident.

27. **Ceryle alcyon.** KINGFISHER.—Common summer resident. Some winter with us.

28. **Dryobates villosus.** HAIRY WOODPECKER.—Tolerably common resident.

29. **Dryobates pubescens.** DOWNY WOODPECKER.—Common resident.

30. **Sphyrapicus varius.** YELLOW-BELLIED WOODPECKER.—Spring and fall migrant. Sometimes abundant, but often not seen during migrations.

31. **Melanerpes erythrocephalus.** RED-HEADED WOODPECKER.—Not uncommon summer resident.

32. **Colaptes auratus.** FLICKER.—Abundant summer resident.

33. **Antrostomus vociferus.** WHIP-POOR-WILL.—Not uncommon summer resident.

34. **Chordeiles virginianus.** NIGHT HAWK.—Common summer resident.

35. **Chætura pelagica.** CHIMNEY SWIFT.—Abundant summer resident.

36. **Trochilus colubris.** RUBY-THROATED HUMMINGBIRD.—Tolerably common summer resident.

37. **Tyrannus tyrannus.** KINGBIRD.—Common summer resident.

38. **Sayornis phœbe.** PEWEE.—Common summer resident.

39. **Contopus virens.** WOOD PEWEE.—Common summer resident.

40. **Empidonax minimus.** LEAST FLYCATCHER.—Tolerably common summer resident.

41. **Otocoris alpestris.** HORNED LARK.—Commonest in spring and fall; many winter with us, and a few are seen in all the summer months; they probably breed.

42. **Cyanocitta cristata.** BLUE JAY. Common resident.

43. **Corvus Americanus.** CROW.—Common resident. The crows winter with us in large numbers.

44. **Dolichonyx oryzivorus.** BOBOLINK.—Common summer resident.

45. **Molothrus ater.** COWBIRD.—Common summer resident.

46. **Agelaius phœniceus.** RED-WINGED BLACKBIRD.—Common summer resident.

47. **Sturnella magna.** MEADOWLARK.—Common summer resident.

48. **Icterus spurius.** ORCHARD ORIOLE.—Rare summer resident. Several nests have been taken.

49. **Icterus galbula.** BALTIMORE ORIOLE.—Common summer resident.

50. **Quiscalus quiscula.** CROW BLACKBIRD.—Common summer resident. Partial to cemetries and groves of coniferous trees near water; seldom found elsewhere.

51. **Carpodacus purpureus.** LINNET.—Common in spring. Some breed, and a few occasionally winter.

52. **Passer domesticus.** ENGLISH SPARROW.—Common nuisance.

53. **Spinus tristis.** GOLDFINCH.—Abundant summer resident. Often seen in winter.

54. **Plectrophenax nivalis.** SNOWFLAKE.—Irregular winter visitant; seen only in the hardest winters.

55. **Poocætes gramineus.** BAYWING.—Abundant summer resident.

56. **Ammodramus sandwichensis savanna.** SAVANNA SPARROW.—Tolerably common summer resident.

57. **Zonotrichia leucophrys.** WHITE-CROWNED SPARROW.—Not uncommon migrant.

58. **Zonotrichia albicollis.** WHITE-THROATED SPARROW.—Abundant migrant.

59. **Spizella monticola.** TREE SPARROW.—Most abundant in spring and fall. Common winter resident.

60. **Spizella socialis.** CHIPPING SPARROW.—Common summer resident.

61. **Spizella pusilla.** FIELD SPARROW.—Common summer resident.

62. **Junco hyemalis.** BLACK SNOWBIRD.—Abundant in spring and fall. Rare breeder: one nest taken July 24, 1890. See *Oologist* for Sept. 1890.

63. **Melospiza fasciata.** SONG SPARROW.—Abundant summer resident.

64. **Melospiza georgiana.** SWAMP SPARROW.—Not uncommon summer resident.

65. **Pipilo erythrophthalmus.** CHEWINK.—Common summer resident. Found in upland slashings, only.

66. **Habia ludoviciana.** ROSE-BREASTED GROSBEAK.—Rare summer resident.

67. **Piranga erythromelas.** SCARLET TANAGER.—Rare summer resident.

68. **Petrochelidon lunifrons.** CLIFF SWALLOW.—Tolerably common summer resident. Restricted to a few favorable localities.

69. **Chelidon erythrogaster.** BARN SWALLOW.—Not uncommon summer resident.

70. **Tachycineta bicolor.** TREE SWALLOW.—Common summer resident. The most abundant of our swallows.

71. **Clivicola riparia.** BANK SWALLOW.—Common summer resident. Restricted to a few localities.

72. **Ampelis cedrorum.** WAXWING.—Common summer resident.

73. **Lanius borealis.** NORTHERN SHRIKE.—Regular winter resident.

74. **Vireo olivaceus.** RED-EYED VIREO.—Common summer resident.

75. **Vireo gilvus.** WARBLING VIREO.—Not uncommon summer resident.

76. **Mniotilta varia.** Black and White Creeper.—Not uncommon in spring and autumn; has been seen in summer, and may breed.

77. **Compsothlypis americana.** Parula Warbler.—Not uncommon migrant.

78. **Dendroica æstiva.** Summer Yellow-bird.—Common summer resident.

79. **Dendroica maculosa.** Black and Yellow Warbler.—Not uncommon migrant.

80. **Dendroica cærulescens.** Black-throated Blue Warbler.—Common migrant.

81. **Dendroica coronata.** Yellow-rumped Warbler.—Common migrant.

82. **Dendroica pennsylvanica.** Chestnut-sided Warbler.—Tolerably common migrant. Sometimes seen in summer.

83. **Dendroica castanea.** Bay-breasted Warbler.—Not uncommon migrant.

84. **Dendroica blackburniæ.** Blackburnian Warbler.—Common migrant.

85. **Dendroica virens.** Black-throated Green Warbler.—Common summer resident.

86. **Seiurus aurocapillus.** Golden-crowned Thrush.—Common summer resident.

87. **Seiurus noveboracensis.** Water-Thrush.—Somewhat rare summer resident.

88. **Geothlepis philadelphia.** Mourning Warbler.—Not uncommon migrant.

89. **Geothlypis trichas.** Maryland Yellow-throat.—Common summer resident.

90. **Icteria virens.** Yellow-breasted Chat.—Not uncommon summer resident.

91. **Setophaga ruticilla.** American Redstart.—Not uncommon summer resident.

92. **Galeoscoptes carolinensis.** Catbird.—Common summer resident.

93. **Harporhynchus rufus.** Brown Thrasher.—Abundant summer resident.

94. **Troglodytes aedon.** House Wren.—Tolerably common summer resident.

95. **Troglodytes hiemalis.** Winter Wren.—Not uncommon winter resident.

96. **Cistothorus palustris.** Long-billed Marsh Wren.—Not uncommon summer resident.

97. **Certhia familiaris americana.** Brown Creeper.—Not uncommon resident. Seen oftenest in spring.

98. **Sitta carolinensis.** WHITE-BREASTED NUTHATCH.—Common resident.

99. **Parus atricapillus.** CHICKADEE.—Abundant resident.

100. **Regulus satrapa.** GOLDEN-CROWNED KINGLET.—Abundant migrant: These birds usually winter with us in small numbers, and some are seen in summer.

101. **Regulus calendula.** RUBY-CROWNED KINGLET.—Common migrant.

102. **Turdus mustelinus.** WOOD THRUSH.—Common summer resident.

103. **Turdus fuscescens.** WILSON'S THRUSH.—Abundant summer resident.

104. **Turdus aonalaschkæ pallasii.** HERMIT THRUSH.—Not uncommon during migrations.

105. **Merula migratoria.** ROBIN.—Abundant summer resident.

106. **Sialia sialis.** BLUEBIRD.—Abundant summer resident.

THE MAGPIE IN WASHINGTON.

(*Pica pica hudsonica.*)

W. L. DAWSON.

In his chosen haunts amongst the brown hills of Yakimer County, there is no bird more interesting than the Black-billed Magpie. Like all the other aborigines who will not adapt themselves to the ways of civilization, he has been compelled to seek his home in out of the way places.

During a residence in eastern Washingon of some four seasons, I had ample opportunity to note the habits of this bird, both as it wintered in the valleys, and as it spent the breeding season in the lonesome foot-hills.

Through the short winter it hangs about the farmhouses, with an eye to pilfering from the poultry yard, or else in anxious expectation of its annual festival, "slaughtering time." Necessity alone makes him so bold, for as soon as the warm Chinook winds drive off the snow, early in March, he repairs to the lonesome canons in the foot-hills, and for the rest of the year severs his connection with the busy world.

I made four different visits to their retreats, and each time returned well laden with specimens for the cabinet.

Starting early in the morning, on horseback, a ride of three hours would bring us—for I usually went with a brother collector—over the hills, barren save for sage-brush, bunch-grass, and resin-weed, to one of several "Springs" known to us. The springs themselves were mere excuses for the presence of some scores of willows, quaking asps, and thorn bushes, placed in a deep ravine and somewhat sheltered from the wind by the steep hill-sides. In these trees and bushes the magpies build their nests, at a height varying usually from five to thirty feet, although I have found nests resting on the ground.

A well built magpie's nest is quite an affair; in its normal shape a huge ball of sticks, with the under half shaped and strengthened by a cup of mud a foot across and an inch in thickness; this in turn well dried and carefully lined with roots. The dome is shaped like the bottom, but no mud is used in its construction. The main entrance is through a rather indistinct hole in the side, but as I generally tried to approach the nest from this side, I noticed that the birds often struggled through a less marked opening in the other side. The whole structure averages two or two and a half feet through from top to bottom; but of this there is every variation; in some rare instances the nests had no tops.

Whether or not the birds believe that they can protect their eggs from man, if they only built their nests strong enough, the tendency certainly seems to be toward larger and larger nests. One that I found last spring was a perfect mediæval castle. It was four feet in height by three and a half in breadth, and that, too, making liberal allowance for projecting sticks. It was evidently a new nest and built on the most approved plans of modern magpie architecture. As magpies are most inveterate egg thieves, this huge structure might have been reared with a special view toward securing for its owners a safe retreat from the just indignation of the bird world. In vain were all their precautions, for when I stormed the fortress the bold brigand was obliged to flee, and leave his treasures.

The size of the sticks that they bring to their nests is sur-

prising; some having been found as much as three feet long, and others, shorter ones, as much as three-fourths of an inch in thickness; these last however are rather remarkable exceptions.

The average set of eggs is eight, although nine is not infrequent and one set of ten eggs is recorded. Breeding begins in the latter part of March and is at its height in the middle of April.

Although for the most part the birds keep at a respectful distance, occasionally an over-bold one comes near enough to give you a sound scolding. It is an experience to be remembered, being up in a thorn tree on a windy day, clinging with one hand to a branch, and with the other trying to force an entrance to a magpie's stronghold, while the wind blows the thorns against you, and the magpie, perched just out of reach, gives you a good curtain lecture.

Of the magpie in captivity much has been written, beginning as far back as Plutarch; and small wonder, for surely nothing could succeed better in entertaining than the sly genius and originality of a tame magpie. His well known penchant for hiding bits of meat and chance odds and ends "for future reference" is a constant source of amusement. But he is not to be trusted around the poultry-yard if once he acquires a taste for eggs. I once saw a magpie flying away from a hen coop with a hen's egg in its bill, and I watched it till it lighted several rods away. I immediately frightened it away and the egg was not pierced, broken, or in any way injured, but showed simply the dirty marks of the magpie's bill. The egg was of medium size and certainly made quite a mouthful for such a bird.

Last year, in the latter part of May, I succeeded in capturing a couple of young birds which evidently had quitted the nest several days before. The indignation of the parent birds knew no bounds. I have taken quite a little "sauce" from birds, but I think I never before stood under such a torrent of abuse as those birds heaped upon me when I held up their fledgelings. They could not find ad-

jectives enough in their vocabulary to apply to me, and when strong language failed them, in their impotent fury, they fell to pecking the limbs on which they stood, snapped at and broke off the twigs, and even lit on the ground near me and tore up the earth with their bills, perfectly beside themselves with rage.

Although their range in Washington crowds up to the pine belt, evergreen timber does not seem congenial to them. On this account their presence west of the Cascade mountains has not been recorded, as nearly as I can find out, except in the following instance. On October 7th, 1890, in that time of year when non-migrants have nothing to do but to loaf around and kill time, I met a party of about twenty sight-seeing magpies within a mile of the sea shore and at least a hundred miles west of their usual range.

The magpie is a notable bird; but after all, obscurity is the best passport to long life According to Nicollet magpies were once common in Cook County, Illinois, but now they are rare anywhere east of the Rockies. At this rate one might almost be led to think that they must ere long join the bison. Perhaps, however, when it comes to the test, their native cunning will stand them in hand in the struggle for existence even better than it has with the crow.

REPORT OF THE PRESIDENT FOR THE WORK OF 1891, ON THE FRINGILLIDÆ.

The following report has been compiled from notes received from members of the chapter from several states: Messrs. John A. Donald, Decatur, and Chas. D. Oldright, Austin, Texas; Messrs. F. M. McElfresh, Champaign, and F. A. Gregory, Rockford, Ills.; Messrs. C. P. Howe, Waukesha, J. N. Clark, Meridian, and R. M. Strong, Wauwatosa, Wis.; Mr. D. D. Stone, Lansing, N. Y.; Mr. H. P. T. Weathern, West Farmington, Maine; Mr. John H. Sage, Portland, Conn.; Mr. J. W. P. Smithwick, Sans Souci, N. C.,

and from my own observations in Iowa and Ohio. To these gentlemen I desire to express my thanks for their interesting and valuable notes.

A number of interesting questions have arisen as we proceeded with the report. Can we not, in our further study, satisfactorily answer them? Our interest grows in proportion to the effort we expend in study and research. Let us increase our interest.

Carpodacus purpureus. Purple Finch.

Mr. D. D. Stone finds this finch a common breeder in Oswego Co., N. Y. He finds the first nest as early as May 8, and the last as late as June 30. The bird builds preferably in fir, spruce, or cedar trees, but he has twice found nests in apple trees. From three to five eggs are laid. They are greenish in color, finely dotted with dark browns and blacks.

Spinus tristis. American Goldfinch.

There seems to be considerable confusion among observers between Goldfinch and Yellow Warbler. Several records are very evidently for those of the Warbler and not of Goldfinch. The Warbler is strictly a migrant, and does not arrive from the South until the first of May, while Goldfinch is a resident nearly throughout the United States. In winter he appears in plain dress and is easily overlooked, especially since his song gives place to a very sparrow-like "chip." The difficulty is aggravated by the fact that Goldfinch dons his yellow and black summer dress about the same time that the Warblers arrive from the South. Bear in mind that the Yellow Warbler nests in May and June, and that Goldfinch waits until July and August. Don't let these two birds give you any more trouble.

Mr. Stone has found nests in New York as early as July 8; and Mr. Strong in Wisconsin as early as June 10. These are exceptional dates. In Iowa I have never found a nest before the middle of July. The last found was September 6, four fresh eggs.

At Lansing, N. Y., fruit trees are preferred as nesting places, the peach being chosen oftenest. In Milwaukee Co.,

Wis., nests may be found in almost any kind of trees or bushes. In Iowa thistles are first choice, then the young sumac, and lastly the topmost branches of young oaks and elms. Thus the height from the ground may vary from one foot to forty or fifty feet.

The material of the nest seems to be very uniform the country through, with unimportant differences for the different localities. Vegetable fibres, shreds of bark of asclepias, rootlets, grasses, fine leaves, horse-hair, wool, thistle-down in nests made late, and other soft cottony materials are woven into a compact, neat nest.

The nest is usually placed in an upright fork, the tough fibres of the outer nest woven about the branches, securely lashing the nest into the fork. In the tops of trees nests are very firmly lashed.

The usual number of eggs is four. But Mr. Stone has found five not uncommonly, and six rarely. I have invariably found four eggs in the nest both early and late.

In color the eggs are uniform bluish-white, rarely with a tint of green, and never spotted.

The eggs hatch in twelve days from the time they are laid, and the young leave the nest in fifteen days. The young appear and leave the nest in exactly the order in which the eggs were laid; one egg being laid each day.

Late one October I found a nest of Goldfinch in the topmost branches of an oak tree in which were the skeletons and quill-feathers of three young birds. The parent birds were probably killed, or the young drowned or chilled in a severe storm.

Why does Goldfinch wait until July and August to rear its brood, when the other birds nest in May and June, months apparently far better suited to brooding? Here is food for thought and opportunity for investigation.

Poocætes gramineus Vesper Sparrow.

All observers know the Vesper Sparrow, or Grass Finch, or Bay-winged Bunting. It is a common breeder to the North, found only in winter or during the migrations at the South. At Meridian, Wis., Mr. J. N. Clark finds it an

abundant breeder. It is abundant in Milwaukee Co., according to Mr. Strong; "common in western New York." —D. D. Stone; "common in Connecticut."—Sage; and "common in Maine."—Weathern. I have never found it breeding at Grinnell, Iowa; but it is not uncommon at Oberlin, Ohio.

It nests early and late. In Wisconsin, according to Clark, Hŏwe, and Strong, nests may be found with fresh eggs from April 20 to July 15; being most numerous in the middle of May.

The nest is always on the ground, usually concealed by a tuft of grass, a bunch of weeds, or a corn-hill. It is composed of fine grass, a few weed-stalks, and leaves, usually lined with hair and rootlets. Old stubble or sod is a favorite nesting place.

The eggs are from three to five in number, of a pale greenish-white color, sometimes grayish or even pinkish, marked more or less heavily with spots, splashes, blotches, and lines of reddish browns, the lines often appearing blackish. Sometimes the whole egg appears washed with this reddish-brown.

In shape the eggs are usually elongate ovate, varying to short ovate. .83 x .61 is an average size, with very considerable variation.

The period of incubation is thirteen days. The young leave the nest in fifteen to seventeen days.

Ammodramus sandwichensis savanna. Savanna Sparrow.

The range of this sparrow is nearly the same as that of the Vesper Sparrow, but the bird is not so well known. Only Mr. Clark has found it in Wisconsin as a breeder. Mr. Stone finds it common all summer in New York, and Mr. Sage says that it is common in Connecticut. In Iowa it is common in the fields; but I have not met with it in Ohio; it certainly is not common in Lorain County.

Like the last, its nest is placed on the ground, usually beneath a tuft of grass or other shelter; meadow is a favorite nesting place. It is sunken flush with the surface and is rather loosely made of fine dry grasses. I have usually

found nests in rather low places, seldom on uplands.

Mr Stone finds nests most common about May 15. I have found them as early as May 1, and as late as June 15. Mr. Stone records a nest with five eggs June 6. Early nests may contain six eggs, usually five, and late only three. The average set is five. The eggs are a greenish- or grayish-white, very finely marked with spots and dots and small blotches of light brown and lilac, forming a ring about the larger end or becoming almost confluent in a great blotch covering it all over. Incubation lasts twelve days, and the young leave the nest in about fifteen days.

Ammodramus savannarum passerinus. Grasshopper Sparrow.

Although pretty generally distributed over the Eastern United States, the Grasshopper Sparrow does not seem to have been very widely noticed. There are only the records of Mr. Sage for Connecticut, and my own for Iowa. Mr. L. M. McCormick secured three specimens on the Vermillion river bottoms during the season; they were evidently breeding. Mr. Sage calls it "a rare S. R." in Connecticut. He has found two nests. One, June 1, five eggs, the young well developed. Nest in an open, dry field, and not protected by a tuft of grass or weeds. The other, June 6, four eggs. Nest in a mowing lot, on high ground. In Iowa, *passerinus* is one of our commonest sparrows. Nest building begins the second week in May, and fresh eggs are frequently found in July. First sets sometimes contain six eggs, July sets almost invariably only three. Five is the normal number. It is very common to find single eggs of *passerinus* lying upon the bare ground.

The nest is made in a slight depression made by the birds, usually beneath a tuft of grass or weeds. It is composed almost wholly of fine, dry grass, seldom lined with a few hairs. Early in the season it is frequently arched over, and is very pretty. Later it is a plain, flat nest.

The majority of nests are in lowlands, *not* wet lands, or on side hills sloping to depressions. A very small percentage are on the hill-tops. The bird flushes finely from the

nest, always betraying its position. Sometimes she will sit until one is almost past or upon her before flushing.

There is little danger of mistaking this bird's eggs for those of any other. They do not resemble eggs of any other sparrow in shape or general appearance. Most eggs are short ovate, appearing plump and full at the larger end. They are of a pure white color, slightly polished, and rather sparingly spotted, dotted, and sparingly blotched with reddish browns, mostly around the larger end, often in the form of a ring. The markings are never so heavy that the ground color cannot be easily seen.

The period of incubation is twelve days, and the young leave the nest in fifteen days. When hatched they are covered with dirty looking down. For a fuller account of this bird's habits, see O. & O. S. A. Vol. I, No. 2.

Ammodramus henslowii. Henslow's Sparrow.

No one seems to have noticed this bird except myself. Even the books find little to say of it. In Iowa it is common in the fields. The first arrivals from the South are always found in the underbrush skirting native woods. Later they move out to their prairie homes, just as the Grasshopper Sparrows are arriving from the South. Their weak little voice will not be heard among all the rest unless one listens very attentively for it.

Soon after its appearance on the prairies nest building begins, about the middle of May. I found a nest with eggs nearly fresh May 25. So few have been found that no exact dates can be given. From unmistakable indications we would be safe in saying that nests with eggs may be found as late as July 10.

The nest is placed on the ground, usually in a slight depression, and has for a shelter a tuft of grass or bunch of weeds. The material is fine dry grass, with a few hairs frequently. The use of feathers is accidental, as they are evidently from the mother bird's breast, and are not built into the material of the nest.

The eggs resemble those of the last species, but usually have a greenish or grayish tint with brown markings not

so large. The average size is .75 x .57, thus being rather smaller than those of *passerinus*.

Chondestes grammacus Lark Sparrow.

In the preliminary report on the sparrows I mentioned this bird as not common in Oberlin. I have since learned that it had not thus far been taken in Lorain County, but that it had been found within the state.* Its home is the Mississippi Valley, from which there are some very full notes.

It is interesting to note how different the nesting habits of these birds are as we pass from south and west to north and east. Messrs. John A. Donald of Decatur, and Charles D. Oldright of Austin, Texas, have sent in very full notes, so that we are able to make a careful comparison. Mr. Oldright says, "nests are sometimes on the ground sunk to its level, and concealed in a tuft of muslin weed or other plants; but this is not so frequent in Travis County as in less wooded localities. Here nests are found in bushes and trees, usually not less than six feet high, and sometimes as elevated as thirty feet. Of the twenty-eight nests by Mr. Donald twelve were on the ground in the open prairie or field, fifteen in trees or brush or vines, while one was on top of a post under a cotton platform. Of the twenty-eight nests, sixteen were in the prairie, seven in the timber belt, five in the city of Decatur, one nest was in an elm tree, fifteen feet up, overhanging a road. Three were within a few feet of public roads, three were placed in door yards. The average of those placed above ground was seven feet. In Iowa nests are invariably on the ground, sunk flush with the surface, sometimes concealed in a tuft of grass or bunch of weeds; often in the open with no attempt at concealment.

The fields of fall-plowing are favorite resorts early in the season. I have very frequently found nests early in May, as the ground was being worked the first time. After the corn is well grown, late in June or early in July, nests are

*On May 20, 1892, Mr. L. M. McCormick took several specimens on the Vermilion River bottoms.

placed at the foot of a corn-hill. All of the nests that I have found have been in fields or meadows.

In Wisconsin Messrs. Strong and Clark find nests always on the ground, sunken to its level, in pastures or fields. Thus the habit of building above the ground is peculiar to the south and west. The difference is not due to a greater scarcity of timber at the north and east, for there is fully as large a proportion of timber to prairie there as in Texas. Let some one study out the reason.

Mr. Donald describes a typical nest as, "tolerably bulky, composed mostly of muslin weeds, with a little grass: lined first with rootlets, then with horse-hair." He has found but three nests which did not contain muslin weed. Two of these were composed of grass and weeds, and lined with rootlets; while the other was on the ground and composed wholly of grass. "The soft, cottony muslin weed seems to be a characteristic of this specie." Mr. Oldright describes the nest as composed of about the same material, but does not consider it bulky, but rather compact. He finds that those made on the ground are much slighter and looser. Mr. Donald finds that during the early part of the season nests are almost invariably in trees or bushes, while in June they are mostly on the ground. A point well worth noting.

In Iowa and Wisconsin the nests are made of weed stems, dry grass, and rootlets; always with a preponderance of rootlets. The nests are not compactly built, but strong enough so that they can be easily preserved. Often no other material than rootlets is used.

In Texas the birds rear two broods. The season extends from April 15 to June 22. Mr. Donald's earliest nest was April 18; Mr. Oldright's latest June 15. In Iowa and Wisconsin two broods are raised; the first nest May 1, the last July 10. Thus at the south the birds are more forward in spring.

The average set in Texas contains four eggs. Of twenty-seven sets found by Mr. Donald eleven contained five eggs, thirteen four, and three three; all known to be com-

plete sets. Mr. Oldright says, three, four, and five constitute a set.

In Iowa I have never found more than four. But in Wisconsin Mr. Clark has found five in a nest.

A series of eggs collected by Mr. Donald show an average of .79 x .61. The largest is .86 x .64, the smallest .62 x .50 which is evidently a runt. The next smallest is .75 x .58. Sets taken in central Iowa show an average .76 x.54. Thus Iowa eggs are more spherical and smaller. In shape they are short ovate

The ground color is pearly white marked with a few pin points of black to heavy smudges of red umber. The scratchy, wavy lines are generally characteristic, according to Oldright. Iowa eggs are much the same. The markings are usually confined to the large end, and never heavy enough to obscure the ground color. The blotches, scratchings, and pencilings are usually clove brown, with blotches of lavender appearing as shell markings.

The period of incubation is twelve days, and the young leave the nest in fifteen or sixteen days

Spizella socialis Chipping Sparrow.

This bird is almost too well known to require consideration here. But it may be interesting to compare dates of nesting in the different localities. Chippy does not breed in Texas. But in North Carolina Mr. Smithwick says that the first nest is made the first of May, and the last to be found the last of June. In New York, according to Stone, the first nest is made May 10. In Iowa the first nest found was May 1, the last June 10. In Wisconsin Clark found the first nest May 15, Strong first week in May. The last one found by Mr. Howe was June 20. In Maine Mr. H. P. T. Weathern says that Chippy does not begin to build till late in May. Nests may be found as late as July 1. Thus the southern birds are several weeks earlier than the northern.

Chippy builds his nest above ground, rarely as high as thirty feet, usually about six, in trees, bushes, shrubs, and vines. Mr. Strong says that the nest is sometimes placed

on beams of buildings. I have found more nests in ornamental shade and garden trees than anwyhere else. The social habits of this sparrow lead it to appropriate the artificial shrubbery in lawns and nesting sites. It is very interesting to note with what regularity and precision birds will return to their old nesting tree or shrub and build a gain their new home within it.

The nest is made of much the same material the country through. It gives the impression of being rather frail, with only dry grass and a lining of long hairs; but in fact the nest is quite durable and compact. Often nests are wholly made of hair. And it is worth noticing that the long hairs from a cow's tail are more commonly used than horse-hair.

Chippy lays four eggs usually, rarely five, late in the season only three. It is one of the birds most imposed upon by the Cowbird. I have several times found three eggs of Cowbird in one nest with only two Chippies' eggs.

The eggs are a uniform greenish blue or bluish green, sparingly speckled and spotted with blackish brown and purplish, chiefly around the larger end. Mr. E. B. Peck gives the average measurements as .69 x .50, which is the average for Iowa.

Mr Clark says that the period of incubation is thirteen days, and that the young leave the nest in ten days. We might expect a period of only twelve days with so small a bird.

Spizella pusilla. Field Sparrow.

The breeding range of Field Sparrow seems to be farther south than that of Chippy. Mr. Oldright finds it a common breeder in Travis County, Texas, while Chippy was only a winter visitor there. The notes represent it as occurring in every locality as a breeder.

In Texas it begins to breed April 15, and continues till May 15. In North Carolina the first nest may be found the first week in May, and the last one the last week in June. In Iowa the first nest is May 10, the last July 10. In Wisconsin the first is a little later—May 20, the last June 28. In

New York Stone records the first nest May 1. In Connecticut Mr. Sage gives the first nest May 19.

In Texas, North Carolina, New York, and Iowa, nests are above ground at all seasons, either in grass, weeds, bushes, or trees, usually not more than two feet, often only a few inches; Mr. Smithwick records one nest in a cedar, thirty feet up; this is very unusual. In Wisconsin all three observers say that the first nest is placed on the ground, later ones in grass or bushes. Mr. Sage says that nests are usually on the ground, sometimes in bushes. There seems to be a tendency for the birds to seek the ground at the north and shun it at the south. Can weather be the cause?

In any situation the nest is made of about the same materials, in the same manner. Small weed stems, dry grass, and long hairs from a cow's tail are the regulation materials, all woven into a neat nest. Often a few leaves may be used. But downy and cottony substances are avoided. The location chosen is usually in the vicinity of a woods, in the brush and shrubs skirting it. Mr. Oldright finds that in Travis County, Texas, this sparrow is confined to one small tract near Austin.

Field Sparrow lays from four to six eggs, average five, according to Clark; three to five, average four, Strong; four average, Howe; three to six, average five, in Iowa; three or four, average four, in Texas, Oldright; two to four, average three, in North Carolina, Smithwick; three to four, average four, New York, Stone; three to five, average four, Peck; three to five, average four, in Connecticut, Sage. Cowbird frequently inposes upon this sparrow. Two broods are raised in most localities.

In color the eggs are buffy, clay, or often greenish, white, rather thickly spotted, blotched, and washed, with several light shades of brown, and lavender; the markings being more pronounced and thicker at the larger end, sometimes, becoming confluent so as to hide the ground color. The eggs are rather elongate, oval, or ovate, in form. They

vary from .62 to .72 in length by 50 to .55 in breadth. The average is about .68 x .53.

The period of incubation is twelve days, and the young leave the nest in twelve or thirteen days.

Melospiza fasciata. Song Sparrow.

The range of Song Sparrow seems to correspond very nearly to that of Chippy. It is not found breeding in either Texas or North Carolina. Even in Iowa it is not common in summer in the central portion. In Wisconsin, Iowa, New York, Connecticut and Maine, it is common all summer. In Wisconsin Mr. Clark found the first nest May 12, last July 12; Howe May 17, first; Strong May 3, first, eggs slightly incubated last week of July, the last. In Ohio May 10 is the first date. In New York, April 22, Stone. In Connecticut, May 17, last June 16, Sage. In Maine, May 20, Weathern.

Song Sparrow builds its nest either on the ground or in trees or low bushes Mr. Weathern has found nests "in a hollow place in a tree, four feet up." Mr. Clark says, "the first nest is on the ground, the second in willows." Strong finds some in brush piles and weeds. In Ohio I have found them only on the ground, and in Connecticut Mr. Sage finds them only on the ground. They are seldom many feet above ground in any locality.

The nest is made of weed stems, leaves, grass, and lined with fine grasses and hair. The nest is not very compactly made; the outer layer of leaves and weed stems falling off.

The eggs range from three to six in a set, usually five. They vary so greatly in coloration that only a general idea can be given of the general appearance. Some are pinkish white, running through, greenish white to light bluish green. The coloring is usually in rather heavy blotches, with a few spots and splashes of several shades of dark brown, all so heavy that the ground color is obscured or hidden.

In size they average .73 x .57, varying a few hundredths each way. Thus they are ovate in shape, almost oval.

The period of incubation is thirteen days. I have never been able to study carefully the full history of Song Sparrow.

Melospiza georgiana. Swamp Sparrow.

The range of Swamp Sparrow is rather more northerly than that of the last. It does not occur in Texas and North Carolina as a breeder, nor in central Iowa. I have not found it at Oberlin, Ohio, though I presume it may be found in the swamps on the lake shore. In Wisconsin it is common in summer, according to Clark; and abundant according to Strong. There it begins to build the last week in April, and eggs may be found as late as the first of August. In New York the first nest was May 2. Mr. Sage records no nest from Connecticut, and the bird is unknown to Maine observers.

As its name suggests, it is preeminently a bird of the swamps and lowlands, building its nest on the ground, among the rushes and sedges which abound where water stands. The nest is made of rushes, dry grass, and hair, after the pattern of Song Sparrow; and its eggs so nearly resemble those of that species that it is often difficult to distinguish between them: they are, however, usually more clouded, and the marking more indistinct. In size they average .76 x .59, thus being larger than eggs of the last species. The number of eggs in a set ranges from three to five; usually four.

The period of incubation is thirteen days.

Pipilo erythrophthalmus. Chewink, Towhee.

Towhee is not known south as a breeder. Messrs. Clark, Howe, and Strong find it common in Wisconsin. In Iowa and Ohio it is very common. It is fond of woods in which underbrush is rank, and in little copses of brush. A brush grown clearing is a favorite resort.

Building begins May 1 in Iowa and Ohio. This spring I found a nest containing three of Chewink and two of Cowbird, May 7. The eggs were addled. In Wisconsin nesting begins a week later than in Iowa. July 1 is a rather extreme date for fresh eggs.

The nest is placed on the ground preferably at the foot of a bunch of brush or weeds, or at the foot of a tree against which leaves have drifted. I have found a few out in

an open orchard, on the ground, and a few four to six feet up in bushes.

Nests are made largely of dry leaves, with a lining of dry grass, with a few hairs and feathers occasionally. The few nests in bushes had a foundation of small twigs.

The average set contains four eggs, often three; rarely five complete a set. Mr. Strong records a nest found May 28, '88, which contained one normal egg of Towhee and one runt, with four of Cowbird! I have often found two and three eggs of Cowbird in Towhee's nest.

The eggs are usually whitish, sometimes pinkish or bluish in color, profusely and quite evenly spotted, blotched, and splashed, over the entire surface, with browns of a pinkish shade. Often the markings are so heavy that they obscure the ground color, making the egg have a pinkish appearance. In size the eggs average .96 x .72.

Cardinalis cardinalis. Cardinal Grosbeak.

This is a southern bird, not reaching central Iowa, but found in Ohio rather commonly as a resident. We are indebted to Messrs. Donald and Oldright for our notes, as I have never taken a nest in Ohio.

In Texas nest building begins about April 1. Mr. Donald records the first April 8, one egg; but a nest containing four young April 20. His latest is June 30, incubation slight. He says two broods are raised.

The birds place their nest in trees or bushes, usually trees. Of fourteen nests found by Mr. Donald seven were in oak uplands, six along prairie branches of streams, and one in the city in a honeysuckle vine covering a summer house. The highest was eight feet, lowest two, average five. He says, "Cardinal, as a rule, builds his nest in some bushy tree or bush, generally concealed, though I have found them in public places."

"A typical nest is bulky. First, a large network of small briars and other twigs; second, the nest proper, composed of the inner bark of grape vine, leaves and grass, and root lets; the grape vine bark being characteristic. The nests are usually well built, but sometimes frail."

Of twenty-one sets examined one contained five eggs, twelve four, eight three. Mr. Oldright records one set of five, and several taken by Mr. N. Y. Benedict in Young County, first nests four, later three. A series of eggs shows an average of .93 x .69, the largest 1.05 x .68, smallest .75 x .59, probably a runt.

The ground color of eggs varies from a white, to a greenish or bluish, even to a brown tint. The markings are reddish brown, lavender, and lilac, often pretty evenly distributed over the entire surface, sometimes confined to the larger end, there becoming confluent in a blotch.

Habia ludoviciana. Rose-breasted Grosbeak.

This is another northern species, breeding commonly in Iowa and Wisconsin, not so commonly in Ohio. Messrs. Clark and Strong list it as abundant in Wisconsin all summer.

Nesting begins about May 20. Clark gives the first nest May 24, Strong May 20, last July 9. Of the position of the nest, Clark says, "Nest in upright fork of slender sapling." Strong says, "Nests placed from eight to twenty feet up in crotches of small trees and forks of limbs of larger trees." I have found many nests in grape vine thickets and on horizontal branches like nests of Scarlet Tanager.

Strong says of the composition of the nest, "Nests are made of small sticks, twigs, weed stems, straw, dried grass, etc Most of the materials used are too stiff and brittle to be bent, so the ends of the twigs are left sticking out at all angles." Iowa nests are made of light colored material, often of a small vine woven neatly and compactly. A few grass and weed stems are often used, but no twigs are ever seen. The whole structure is so thin that the eggs can be seen from beneath. There is no attempt at fixing the nest in its position, so it is frequently tipped over or tilted.

A nest complement is three to five, usually four eggs. The eggs are a greenish blue or bluish green, more or less spotted and blotched over the entire surface with reddish brown and lilac shell markings. The markings seldom be-

come confluent. The average measurements are .98 x .73 ; largest, 1.05 x .71 : smallest .92 x .62.—Strong.

Passerina cyanea. Indigo Bunting.

The notes relating to this bird are very scanty. Mr. Oldright says that it breeds rarely in Texas, and Messrs. Clark and Strong find it tolerably common all summer in Wisconsin. It is common in Iowa, less so in Ohio. In Iowa it begins to build about June 1. The first nest with eggs was found June 6, the last July 10.

The nest is placed in low bushes or bunches of weeds or grass from three inches to four feet up. It is made of weed stalks, coarse grass, and leaves, lined with finer grass. The weed stalks and leaves form a deep foundation, and the other material is placed upon it.

The average set is four eggs, late in the season only three. The eggs are whitish with a bluish tinge, often quite blue, often almost cream white, and are very rarely spotted with brown. They measure .75 x .52. Period of incubation twelve days.

Passerina ciris. Painted Bunting, Nonpareil.

The Nonpariel is a bird of the South, being found only by Texas observers, where it is common. Mr. Oldright found the first nest May 15 ; Mr. Donald the last June 22.

The nest is placed in a small bush about three feet up, and resembles that of Field Sparrow, Mr. Oldright says. "It is composed of large white lichens and heads of a small plantain fastened together with spider-webs on the outside, grass on the inside, and lined with rootlets "—Donald.

Four eggs make a set. They are white or bluish white, speckled, spotted, and blotched with brown, chiefly at the large end. Four sets collected by Mr. Donald average .67 x .50.

Spiza americana. Dickcissel.

Better known as Black-throated Bunting. It has an extended range north and south, breeding from Texas to Minnesota. I have never found it in Ohio.* Mr. Strong

*Since the above was written Mr. L. M. McCormick has found it breeding on the Vermilion River.

record s one from Wisconsin. (WILSON QUARTERLY, Vol. iv. No. 1. page 34.) Both Texas observers find it abundant. In Iowa it is the most abundant bird.

Mr. Oldright found the first nest May 1. Donald May 20, incubation advanced. In Iowa the first nest May 15; the last August 10. Two broods are raised.

Mr. Donald has never found a nest on the ground, all being in grass, weeds, or bushes, from two or three inches to three feet up. Mr. Oldright says that nests are either on the ground or in bushes up to ten feet above ground. I have found but few nests on the ground; one was in an apple tree, twenty feet up. Usually nests are in low bushes, weeds, or grass, in copses, or neglected fields.

Nests made early in the season are composed of leaves, grass, and weed stalks, lined with fine grass, sometimes with a few rootlets and hair. Later nests, those made in July, are almost wholly made of the dead stalks of the Shepherd's Purse; looking much like nests of Rose-breasted Grosbeak

The eggs are four to six, commonly five, in number, in Iowa, four in Texas. In color they very closely resemble eggs of Bluebird, being light blue unspotted.

Texas eggs average .82 x .61, with a variation of .06 x .04.

In Iowa eggs average .81 x .60. Incubation is completed in thirteen days.

Guiraca cærulea. Blue Grosbeak.

Both Texas observers have found this Grosbeak rare in Texas. Mr. Donald has collected two sets of eggs. One was found June 4, the other May 25.

One was in a Black Jack bush, in the edge of a cotton field, three feet up; it contained four eggs. The other was in the same kind of a bush in the timber in oak uplands, two feet up; it contained two eggs. Both were three miles from Decatur.

The nests were made of weeds, grass, leaves, corn husks, and paper fastened together with spider-webs, and lined with fine rootlets and horse-hair.

In size the eggs average .88 x .63; smallest, .87 x .62; largest, .91 x .64. They are plain, light blue, rarely spotted with lilac shades.

The following are a few species which have been found breeding by one or two observers. No comparison can be made, as there are not notes enough from different sources.

Spinus psaltria mexicanus. Mexican Goldfinch.

Mr. Oldright reports it as a rare breeder at Austin, Texas; he has never found a nest. At Mason, Rev. Ira B. Henry has found it common. (*Mississippi Valley Bird Migration*, page 183.)

Zonotrichia albicollis. Peabody, White-throated Sparrow.

Mr. Stone mentions a set of four taken by Mr. E. S Bryant, at Phœnix, N. Y.

Zonotrichia leucophrys. White-crowned Sparrow

Mr Weathern reports this sparrow as common in Maine, breeding in swamps and thickets.

Amphispiza bilineata. Black-throated Sparrow.

According to Oldright it is rare in Texas as a summer resident.

Peucæa cassini. Cassin's Sparrow.

"In Texas it is common in summer, resorting to mesquite thickets."—Oldright.

We have seen that Lark Sparrow nests in bushes and trees at the south and west, but on the ground at the north and east; that not a few of the sparrows which make two broods build the two nests in different positions or of different material. The fact has been discovered before, but the why has never been found out. Let us make this our work. Only the surface of ornithology has yet been scratched; we must dig deep into it and find there the hidden treasures.

LYNDS JONES.

NOTES.

BLUE EGGS OF THE CROW.

BY W. L. DAWSON, OBERLIN, O.

One day last April, on my return from a trip after crow's eggs, I showed my finds, two sets having the ordinary olive-green and spotted coloration, to a friend of mine. He exclaimed in great surprise: "Why, I thought crows' eggs were light blue; those that I have seen were." In my supreme oological conceit I chaffed him unmercifully for making such a wild statement; but I only succeeded in arousing his Canadian blood, and he stuck to it most positively that he had seen blue crow's eggs in Ontario, and that he had watched them till young crows had been hatched from them.

A few days later, April 30th it was, I started out with my climbers and gun, and was accompanied by a fellow student of marked botanical instincts.

In the course of the afternoon we came to a crow's nest placed about fifty feet high in a beech tree; and the first thing that attracted my notice as we approached, was the head of the crow as she peered anxiously over the edge of the nest. I walked slowly past the tree so as to size it up from another side; and not till then did I point out the bird's head to my companion. At the sight of my threatening finger, knowing that she was detected, the old crow flew off with loud "caws". I soon had on my climbers and made the ascent. Judge of my feelings when I peered into the nest and beheld, not the set of conventional crows' eggs, but a single pale blue one. I grasped the egg, still warm, and hastened down. Nothing but the possession of such a treasure would have made up for my humiliation at the "I told you so" of my Canadian friend, delivered with a very self satisfied chuckle.

Nine days later I revisited the nest, this time taking

great pains in my approach, meaning to secure a shot if possible. It was no use; the male discovered me and set up an outcry, and the female was off like a flash. Both birds were well seen however, and their continuous clamor in an adjacent part of the woods assured me of their interest if not of their sympathies. I ascended the tree with some trepidation, fearing lest the old bird should have gone back on her reputation as a freak. But I was not to be disappointed; there lay three eggs as destitute of markings as any woodpecker's, and having the same delicate blue tint as my first one. The nest was in every respect a crow's, though indifferently well lined. Although unable to secure the parent birds on account of their extreme wariness, I am thoroughly satisfied that the evidence for these *crows' eggs* is the best.

The eggs measure as follows: 1.83 x 1.41 inches; 1.82 x 1.38 inches; 1.78 x 1.39 inches; 1.72 x 1.39 inches; as compared to 1.70 x 1.20 for the average crow's egg.

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On the 28th of May, 1892, while out collecting, I shot a male Olive-sided Flycatcher. This bird had a shining white brown ; the bill, which was slightly larger than ordinary, was flesh colored with the exception of a black spot on the upper mandible The back was spotted here and there with white feathers. WM. ROLFE.

[A case of partial albinism.—ED.]

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While exploring a deep, thickly wooded ravine leading into Vermilion River, Lorain County, Ohio, with a party of botanists, June 4, 1892, the publisher found a nest which he had sought without success for some years.

Following the bed of the clear, cold stream at the bottom of the ravine, we flushed a bird from its nest in the side of a clay bank. The bird flew quickly away, "chipping" sharply, and giving us little chance for observation.

A few minutes later, on the return back to the river we obtained an excellent view of the bird and easily recognized it as the Oven Bird, *Seiurus aurocapillus.*

The nest was placed in a little hollow, in a recess of the

bank, with the sod at the top overhanging it a few inches above. It was not roofed over, and contained the exceptional number of six eggs of the usual color and size; incubation well advanced. The nest was made of dry rootlets, grass, and leaves, with finer rootlets and grasses for the lining.

When we were within four or five feet of the nest, the bird left it, and joining its mate, flew nervously about at a distance, uttering quick, sharp notes of alarm.

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EDITORIAL.

In working over notes for the purpose of making a general report, the first great difficulty to a comprehensive view of any one species is in the lack of notes from widely different localities An ideal report would have for its ba-

sis not only these widely different localities, but all intervening places as well. With our limited numbers we cannot hope for more than an approximation to this. But we have members in Maine and in California, in Minnesota and in Florida, with many between. The difficulty, then, is not in the places which ought to be represented, but in those who should represent them. Not enough members attend to making their reports.

The coming report on the Owls is already fuller than the present one on the Sparrows, but there are still some serious gaps. Thus far nothing but the bare lists are in. Before the first of September, certainly not later than the 15th of that month, all notes should be sent to the President. We want every note that you have. Study the scheme in the last QUARTERLY, and make your report carefully. Omit nothing because you regard it of no interest. We want it!

Measurements of eggs and of birds are particularly desired. The phases of plumage will furnish material for a very interesting portion of the report.

Lose no time in getting your notes together.

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Since our last issue two new active, and two new associate members have joined us, with others likely to do so at an early date. We still have room for those who wish to aid in the work which we are trying to do.

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What shall we study next year? Now is the time to be thinking about it. Before October we should have our plans well matured so that they can be put into definite shape in the next issue, and in the January issue fully worked out. It is a matter in which we are all interested. If any one has a new plan of work let him propose it so that we can have it under advisement.

Not as many notes have been sent in as we hoped. The pages of the paper ought to fairly glow with the freshness of the fields. We all see very unusual things which would be of great interest to all. Write them up briefly and send them in. Notice in this issue what has been discovered by members. You can do as well.

PUBLICATIONS RECEIVED.

The Observer. Vol. III., Nos. 5, 6, 7. Published by S. F. Bigelow, Portland, Conn. A monthly of pages, 11 x 15 in., full of valuable matter to all lovers of nature.

The Taxidermist. Vol. I., Nos. 10, 11, 1892. A twenty page monthly at 50c a year. Published by C. F. Mignin, edited by E. W. Martin, Akron, Ohio. Contains many good articles on general ornithology, and excellent hints to taxidermists by men eminent in the profession.

Ornithologist and Oologist. Vol. XVII., Nos. 4, 5. Published at $1.00 a year by F. B. Webster Co., Hyde Park, Mass. Always full of valuable matter and fresh notes.

California Traveler and Naturalist. Vol. I., Nos. 3, 4, 5. Published by N. L. Hertz & Co., Napa, Cal., at 35c a year, with premiums. It is bound to succeed.

Sports Afield. Vol. IX., No. 1. $2.00 a year. Published by Claude King, Denver, Col. A 100 page monthly, invaluable to sportsmen, containing many fine articles on general science.

Descriptive List of Fishes of Lorain Co., Ohio. By Lewis M. McCormick. Contains a systematic table of 24 families, followed by short, comprehensive descriptions of 89 species found in Lorain Co.; 14 plates add value to the work. A carefully made map of the county is a very valuable aid in locating the places mentioned in the text from which certain species were collected. It is a contribution to the ichthyological literature of Ohio.

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The publisher will be at North Greenfield, Wisconsin until September 20; after that date at Oberlin, Ohio, as formerly.

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